A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION

Incorporating *International Commerce*

NOVEMBER 29, 1971

Commerce Today

Coming Developments in Business and Technology

A New Look In Container Shipments

FROM THE
SECRETARY

Spreading The Contagion Of Confidence

An often repeated word these days is "uncertainty" in reference to the American economy. The press, the columnists, the commentators, all have taken up the cry of uncertainty, saying they don't know what to expect from the stock market, nor what the future holds.

I suggest it's about time to challenge that whole idea. There is a lot of evidence that today's so-called economic uncertainty is largely a fiction.

The American public, the consumer, is confident of the present and the future and is behaving accordingly.

By all measures Phase One of the New Economic Program was a ringing success. Phase Two has an equally good chance of succeeding because the American people have the spirit to make it work.

Confidence

Let's look at the evidence.

1. The leading index of consumer confidence—the Sandlinger index—shows quite clearly that consumer confidence is on the rise.

2. Confidence is encouraged by the downward trend in interest rates of almost every kind.

3. Consumers are beginning to save less, and buy more. The trend is favorable, and it has a long way to go.

4. Retail sales are running at an average of 10 percent above last year, and there is very little doubt that sales will continue to climb.

5. An all-time high was set in consumer installment credit in September. Americans are borrowing more to buy more.

6. During October more automobiles were sold than in any month in America's history.

7. Calendar 1971 promises to be the best year ever for housing. This means a lot of furniture and appliances and other needs are on the way.

8. As for employment, almost 1.4 million jobs have been filled since June, while the unemployment rate dropped to 5.8 percent last month. As employment improves, so does public confidence.

Upward

U.S. News and World Report recently summed it up:

"The economy actually is running at record high levels these days. The pace of business has never been higher. Individual income is at a record. More people hold jobs than ever before. More autos, more homes, most goods in history are being sold. Even corporate profits are estimated to be on the rise. The U.S. 'economic crisis' is shaping up as the most prosperous in history."

These facts are solid confirmations of the strength of the economy and of the forces pushing it forward. They belie uncertainty.

When the consumer is ready to spend, there is no foot-dragging anybody else can do that will stop a strong expansion. At the present time the consumer wants to spend.

The contagion of confidence is spreading. Now is the time for America's business leaders, in their own interest and in the public interest, to make the most of the nation's new confidence—to stop listening to a gospel of uncertainty and start acting upon the clear evidence of opportunity in their markets.

It is time for the contagion of confidence to cover the land.

Maurice H. Stans

Commerce Today

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Vol. II, No. 4, November 29, 1971

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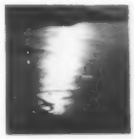

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ECONOMIC
HIGHLIGHTS

Decline In Rates Of Interest Since Mid-August Reflects Curbing Of Inflationary Expectations

Economic Highlights is prepared by Dr. Harold C. Passer, Assistant Secretary for Economic Affairs, and is based on the latest economic indicators (see charts on adjoining page).

The broad decline in interest rates over the past three and one-half months demonstrates the widespread belief in the business and financial community that the New Economic Policy is clamping a lid on inflation. The Consumer Price Index and all other major price yardsticks showed an improved price pattern as the economy started operating under the post-freeze wage-price stabilization program.

Interest rates generally responded quickly to the anti-inflation program announced August 15, even though most of them had been headed upward at the time of the announcement.

This quick response occurred because inflationary expectations lessened overnight. If a lender usually demands a 3 or 4 percent return on his money, he may demand 8 percent if he feels reasonably certain that inflation will be running at a rate of about 5 percent. He knows that, upon repayment, his money will buy 5 percent less. If conditions change and he believes that a period of stability lies ahead, he will no longer require a large "inflation premium."

One reason for President Nixon's decision to change policy August 15 was to prevent interest rates from rising further and slowing the pace of economic recovery. Rising mortgage rates, for example, could have cut into the housing boom; rising rates on state and local government bonds could have delayed some building projects; and rising rates on funds for business could have discouraged spending on new plant and equipment.

The homebuilding industry is particularly sensitive to interest rates. Mortgage rates, which had started upward, declined after August 15, and the October figures on housing starts and permits show that the housing boom is still going strong.

All interest rates do not respond immediately to changing economic conditions. The "conventional" or "administered" rates such as the commercial bank prime loan rate, usually change only after other rates have moved. Administered rates have become more responsive in recent years, however. The prime rate declined 11 times between the record peak in early 1970 and March 1971, from 8.5 to 5.25 percent. This rate had climbed back to 6 percent by mid-August, but it has declined twice since the initiation of the New Economic Policy.

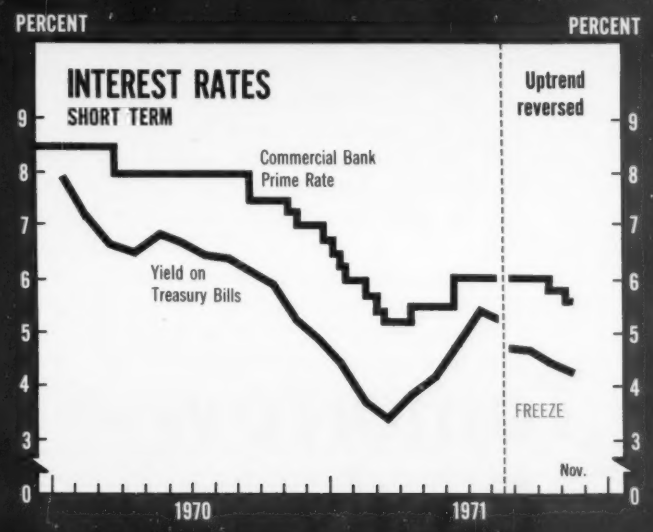
The prospect is for further reductions in the general level of interest rates. There is still some inflation premium in interest rates, and administered rates probably have not yet fully adjusted to the drop in market rates.

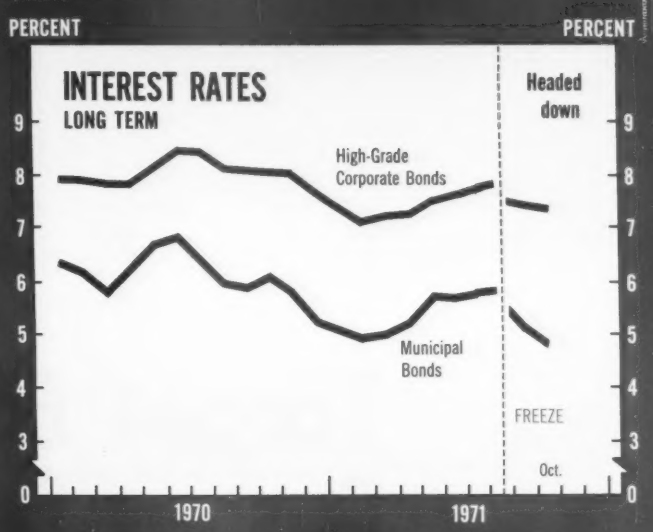
Freeze curbs consumer prices

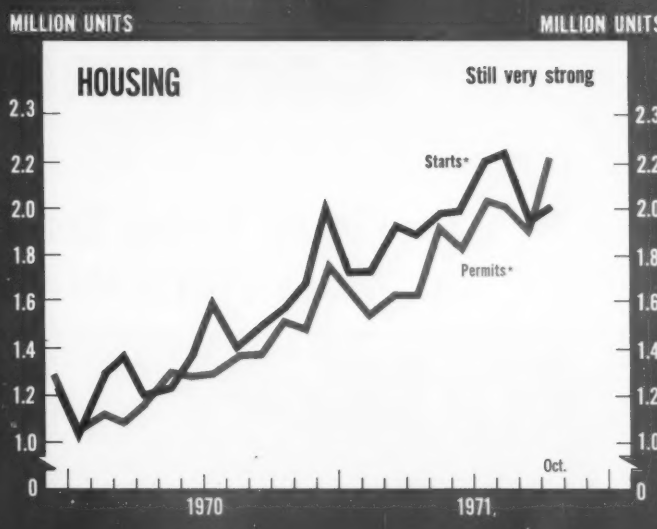
The performance of the Consumer Price Index in October provided further evidence that prices were held in check during the freeze. On a seasonally adjusted basis, the index increased at an annual rate of only 1.2 percent in October and 2.4 percent in September compared with a rate of about 4.5 percent in the eight months preceding the freeze. Thus the rate of increase was decisively lowered by the freeze.

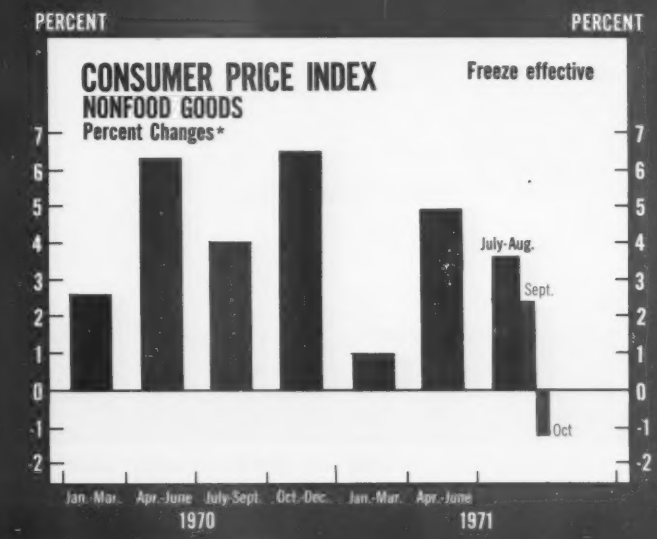
The nonfood goods category—which has very few items that are exempt from the freeze—declined 1.2 percent at an annual rate. Of 98,000 freeze-affected goods and services selected for a special analysis, 93 percent were either unchanged or lower. The figure was about 99 percent for services.

Latest Indicators









*Annual Rates

1/ Secondary market yields on FHA mortgages

Data seasonally adjusted except interest rates

Commerce Today
Vol. II, No. 4
November 29, 1971

Target For Tomorrow—Faster, Less Costly Container Shipments

Goals Being Set To Make Intermodal Shipping More Attractive With More Profits For Industry

END OF LINE—*A cargo which travelled nearly 5,000 miles as a part of the MARINER '71 experiment at the end of the line, Hamburg, Germany, being lowered in its container from the ship.*

Charting a new course to improve container shipments, the Federal Government is ringing for full speed ahead to make the intermodal transportation of containers faster, more efficient and less costly.

To accomplish this goal, the Maritime Administration has launched eight new studies aimed at increasing the amount of container tonnage handled by the U.S. shipping industry, and advancing their competitiveness over foreign-flag operators, according to Andrew E. Gibson, Commerce's Assistant Secretary for Maritime Affairs.

It all began in 1966, when interested government agencies in the United States and the United Kingdom got together to work out a through container project for the transport of containers from an inland point in the United States to an inland point in the United Kingdom and return. While successful in concept, this experiment pointed out several glaring problems which were confronting containerized shipments between the United States and its overseas markets.

Obviously, containerized shipping was

here to stay. The cooperation received in the experiment from the exporters, freight forwarders, rail, highway and ocean carriers, and government agencies could not be improved upon. In spite of this, following the shipment of the seven containers outbound from the United States, and the ten containers on the westbound movement from the United Kingdom, brought to light several facts:

- Documentation of the shipment was clumsy, lengthy and time-consuming, and, in some cases, actually delayed the shipment.
- Some containers actually sustained damage due to unsuitable handling of the equipment, and the actual packing of the containers themselves left a lot to be desired.
- Containers and their fittings were not always in the best condition. Accidents due to faulty fittings occurred.
- Containers were not always properly marked with dimensions, weight, handling instructions and ownership details, causing some unnecessary handling, questions about the use of fork lift trucks as a safe means of loading the containers, and indecisiveness about the ownership details.
- Part of the cargo was not planned to be in the containers. Wooden cases were discovered to be a potential danger to other cargo packed in light cardbox boxes.
- Depot locations did not always ensure adequate cargo availability, or include the provision of the necessary warehousing facilities.
- Quayside Customs examination of the cargo caused considerable delays on this full scale container operation. Acceptance of shippers' seals and seals of Customs authorities in other countries needed to be considered. In two cases, due to this lack of acceptance, two containers required unloading and re-stowage of the cargo, causing untimely delays.

SHIPMENT WAITING—*Units ready for shipment in the public warehouse at Grand Rapids, Mich.*

TRIP BEGINS—*George Clarke, MARAD market development representative, visits main office, Rowe International, Inc., Grand Rapids, to obtain cargo for the trial shipment.*

It was difficult to obtain cargo for the container shipments. Part of this was due to this being a one-time experiment and shippers were reluctant to use different forwarders than in their normal plan of operation, and some concern was evidenced about the delays that might occur. Also, at that time of the experiment, there was a scarity of cargo that then was moved via containers.

Other problems

Difficulty was also encountered in the uncertainty on the part of some of the delivering carriers as to their responsibility in removing the carriers from their chassis at the pier in the United States. Unloading of the containers from the ship was also a problem, taking longer than necessary in some cases, since the stowage plan did not adequately identify the location of the experimental containers in the hold . . . and some containers were overstowed.

The experiment, however, provided a basis of information for the Maritime Administration, with which the agency could begin working on the solutions to these problems.

Five years later, the Eastern Region of the Maritime Administration Ports and Intermodal Systems Office, spurred on by their director, Captain Thomas A. King, picked a sample movement to see how far container shipments had advanced, and to pinpoint areas that needed further improvements to speed up shipments, cut costs and contribute to the smooth-flowing operation of moving the containers from point to point.

The project, called MARINER '71 (*MAR*ad *IN*dustry *E*astern *R*egion), was designed by Capt. King to reflect shipping detail pertinent to the intermodal movement of containers to an overseas destination, from the consignor to the consignee.

TRAVEL TO RAILS—*Driver of prime mover securing doors, before transfer to Pennsylvania Central Railroad Yard on the MARINER '71 container trial.*

SEAL INSPECTED—*James McCarthy, Rowe International, and MARAD's George Clarke, inspect seal on container for shipment to Hamburg, Germany.*

The shipment consisted of tracing the movements of two 40′ containers from Grand Rapids, Michigan to Hamburg, Germany.

As the first step in setting up the illustration, the Market Development Office of the Eastern Region visited Rowe International Corporation in Grand Rapids to interest this company in participating in the experiment. There were two purposes in requesting the participation of Rowe International—not only was their cargo (coin-operated music-box machines) ideal for the purposes of the experiment, but this manufacturer did not use U.S.-flag ships for their exports and the experience might convert Rowe to shipping through the U.S. Merchant Marine.

Partners in Progress

Rowe International agreed, and other participants were invited and accepted. They included United States Lines, Penn Central Transportation Co., International Terminal Operators, who operate the United States Lines Terminal at Port Newark, N.J., and Alba Forwarding, Co., Inc., freight forwarders and customhouse brokers, with offices in New York City.

The shipment began in Grand Rapids in the middle of July, with the loading of the two containers. These containers were then hauled by highway to Kalamazoo, Mich.,

CARGO EN ROUTE—*Containers start trip by intermodal means from Grand Rapids, Mich., by highway to Kalamazoo, Mich., to be transferred to rails for shipment to steamship terminal at Port Newark.*

where they were loaded aboard Penn Central Railway TTX rail car and moved to the International Railroad Terminal at Newark, N.J. Here the containers were removed from the TTX car, placed on their wheels and hauled over the highway to the United States Lines Terminal at Port Newark, N.J., where they were booked for the United States Lines vessel, *American Archer*. With all documentation and detailed requirements for the export shipment accomplished by Alba Forwarding, the containers were loaded aboard the ship and sailed for Germany, discharging the cargo at Hamburg, where the containers were moved by highway to the warehouse awaiting the shipment.

The entire movement took a month, from preparation to final destination. The actual travel time, however, began July 12th, and 21 days later the cargo arrived at its destination.

Although the principals involved were aware that this container shipment was an example, the men who participated were not alerted that this container movement was in any way out of the ordinary—enabling the Eastern Region to evaluate the results of an 'everyday' type shipment, and not one that was given special treatment.

The results were interesting. Many areas of container shipments were found vastly improved over the problems experienced in the 1966 experiment. Container packaging was professionally handled. Documentation was not as lengthy and time-consuming as

AWAITING ARCHER—*In front of container are (from left) Anthony Mannato, Marine Superintendent, I.T.O., Port Newark; Abner Fein, Commerce, C. J. G. Wentz, MARAD; Thomas A. King, Eastern Region MARAD; Howard G. Sloane, chairman, New York Regional Export Expansion Council; Anthony Yula, vice president, Alba Forwarding Co.; James P. Rafter, vice president, U.S. Lines.*

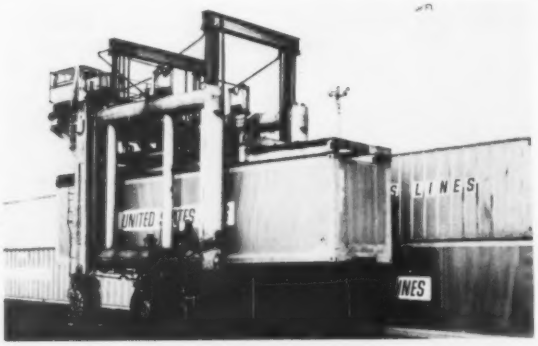
READY TO MOVE—*U.S. Lines Containers loaded aboard TTX cars designed especially to take care of two 40 foot containers.*

MOVEMENT IS EXPLAINED—*MARAD's Carmen Gerace explains ship American program to president of Alba Forwarding Co. I. R. Hasson (left) reads letter of instruction.*

AT PORT NEWARK—*Lift operator prepares to land container. His assistant moves to second container to remove the car's lashing and the chocking gear.*

READY TO BOARD—*Container arrives at gate of I. T. O. Terminal at Port Newark, N.J., before being stowed aboard its ship the SS American Archer.*

TO CARGO AREA—*Van carrier has lifted container from chassis and is placing it in a designated area for cargo to be loaded aboard the SS American Archer. Bay designated by control tower.*



PROCEEDS TO SHIP—*Van carrier has been directed by control tower to pick up container and proceed.*

READY TO SAIL—*Stern view of SS American Archer, United States Lines, after all containers are loaded.*

ARRIVAL IN HAMBURG—*German container cranes unloading the containers from U.S. Lines vessel for delivery to consignee. Container aft end of the vessel can be seen unloading the Rowe cargo.*

in the previous trial. Neither container sustained any damage, and neither had to be unloaded because of custom regulations before they reached their final destination.

On the other hand, the experiment also pinpointed other problems in container shipment. MarAd is aware that many problems still exist with container shipments that need to be corrected, in order to make this type of cargo shipping more attractive to shippers. Consequently, the Maritime Administration Ports and Intermodal Systems in the Commerce Department has embarked on eight new projects designed to effect solutions to these problems.

The first, the design and development of a pilot terminal control system with automatic container identification has already reached its evaluation stage.

This project for an advanced cargo documentation and data transmission system calls for increased use of electronic data processing by U.S. operators, not only facilitating the movement of containers but improving industry profitability.

The evaluation, according to Armour S. Armstrong, Chief of the Maritime Office of Ports and Intermodal System, may call for a recommendation to adopt this electronic system. It could result, he said, in swifter transportation of containers, electronic streamlining of the documentation' procedure, and it may also solve the traffic routing problems between the rail terminals and the carriers.

The automatic car identification system for containers is patterned after a rail freight control data system which marks each container so that it is readily identifiable from a high-quality detailed data base focused on each container. Not only will this system promote more efficient control within the marine terminal, but according to the project director, this identification method will virtually eliminate the opportunity for hijacking any container in the terminals.

The other seven projects were all begun this month. These studies include:

- **Improvement of Inland Carrier and Ocean Carrier Terminal Interchange.** By examining rail, highway and marine terminals to ascertain the average cost per container, the distance and average time involved in principal intermodal transfer points, MarAd will be able to submit recommendations for reducing cost, time, and distance involved in the terminal operations areas of United States-flag

container carriers and inland modes; thereby improving the competitiveness of the American Merchant Marine.

• **Promotion of Refrigerated and Ventilated Containers.** The capability of the U.S.-flag fleet to market refrigerated and ventilated containers needs improvement. To assist the fleet in expanding in this container field, the Maritime Administration is collecting and displaying currently available information regarding the ability of American Flag Carriers to reach and exploit the perishable market of imports/exports requiring this specialized equipment. A logistically sound marketing effort is planned whereby carriers can achieve maximum utilization and in the same stroke meet the needs of the U.S. perishable exporters.

• **Mechanization of Rail Terminal Container Handling Systems.** U.S. rail carriers show reluctance to equip inland rail terminals to handle COFC (Container On Flat Car) traffic. This project will expand the Maritime Administration involvement to promote wider acceptance of marine containers and expanded participation of containerized international intermodal transport cargoes by the U.S. railroads on a COFC basis.

• **Promotion of the Barge Ship Concept.** The Maritime Administration will explore new cargo opportunities now made accessible to the U.S.-flag liner operators through the LASH/SEABEE barge ship concept. Major growth opportunity for the barge carrier concept, in fact, may well be in the conversion of tramp cargoes formerly carried by foreign operators to the flexible characteristic of the LASH/SEABEE liner services. MarAd will also provide a form for identification, analysis, and solution of existing and potential constraints towards the maximizing of this system.

• **Improvement of the Export/Import Domestic Inland Container Balance.** There is an imbalance of freight moving in containers on rail between Pacific Coast ports and inland points—with the heavier movement being eastbound. As a result, container are made empty in the mid-west and sit idle waiting for export freight, or are moved back to the West Coast empty. MarAd proposes to set up a controlled pilot movement of containers under full load in both east and west direction, using both import/export and domestic freight measure costs for comparison against present cost conditions. The promotion is hoped to realize widespread acceptance and use of containers in a true intermodal environment.

• **Revision of Containerized Cargo Movement Data.** The latest figures available which quantify the movement of containerized cargo cover the 4th Quarter 1969, because of an outdated, lengthy form that is used to report this data. MarAd is considering streamlining this form as to its content and manner of reporting and to set up a method of timely feedback to the industry of container movement data.

• **Implementation of a Unified Container Pool (Unipool).** A container pool could solve many problems for the industry, pinpointing the availability and capability of containers to carry cargo where they otherwise might have to be shipped back to owners empty. Many studies have been made of interline pooling of containers and associated equipment, but to date no actual experience has been encountered in this field. The Maritime Administration proposes to set up a small scale prototype operation to permit exploration and documentation of the intermodal system and operations and marketing advantages (or disadvantages) of a working equipment pool.

—Maritime Administration

STOWED AWAY—*The cargo from the two containers is safely stowed away in its German warehouse, after the completion of a successful experiment. Traveling a distance of 5000 miles, not one single carton was damaged or showed signs of wear —a great tribute to the accomplishments now being made in the improvements in containerization.*

Latest Quarterly Data Offer Further Evidence 71 Trade Deficit Is Ahead

Dock Strikes Here, Slackening Activity Abroad Affect Exports, Imports For First Nine Months

Developments in the first nine months, as at midyear, indicate that the United States will experience a merchandise trade deficit in 1971. The U.S. foreign trade position deteriorated markedly this year as import growth far outpaced the gain in exports.

U.S. exports, seasonally adjusted and excluding military grant-aid, were running at an annual rate of $45.2 billion in January-September, only 6 percent greater than last year's total. Imports, on the other hand, increased 15 percent from the 1970 level to $46.1 billion. With imports rising twice as fast as exports, the U.S. merchandise trade balance moved into a deficit position. At an annual rate, imports exceeded exports by $894 million, in sharp contrast to the export surplus of $2.7 billion recorded in 1970.

The slowdown in U.S. exports can be attributed mainly to the substantial slackening in economic activity abroad, especially in Western Europe and Japan. Although some slowdown in economic growth overseas was expected in the light of anti-inflationary measures taken in many foreign countries, it appears that an even more pronounced easing of demand took place than originally anticipated. Meanwhile, the U.S. economy began to pick up momentum after its sluggish performance in 1970. The rise in this country's foreign purchases was more vigorous than would normally be expected from the pace of business activity here, however, as special factors, mainly actual or threatened strikes, stimulated inventory accumulation.

U.S. trade was strongly influenced by dock strikes at most major West Coast, Atlantic, and Gulf ports. The West Coast strike, which began on July 1 and has since been halted by a Taft-Hartley injunction, caused a speed-up prior to the walkout and severely depressed trade at the affected ports thereafter. Substantial advance shipping also occurred in anticipation of the Oct. 1 walkout by longshoremen at East and Gulf ports, especially in September when both exports and imports soared to record levels. Although a strike was averted in the steel industry, inventory building prior to the labor contract settlement stimulated a sharp rise in imports of this commodity.

The distortions resulting from strike-related developments were evident in the quarterly pattern of U.S. trade. After in-

creasing in the first three months, exports dropped in April-June, then climbed sharply in the third quarter when shipments accelerated in September prior to the dock strike. Imports rose in each quarter, with a particularly strong increase in April-June when the inflow of steel was heaviest and arrivals at West Coast ports were speeded up. Only a small rise was recorded in the third quarter as the general acceleration of purchases through East and Gulf ports was counteracted by a drop in receipts at the strike-bound West Coast.

The imposition of the 10 percent import surcharge on foreign goods shipped after Aug. 15 probably had little deterrent effect on imports in the latter part of August and in September. Apparently a sizable amount of the September import volume was already in transit prior to Aug. 15, and hence was not subject to the extra duty. The suspension of dollar convertibility and the subsequent appreciation of foreign currencies also probably has had little effect on U.S. trade so far, as a considerably longer time span is required before price changes affect demand patterns.

Nonfarm exports slow

Shipments of nonagricultural products rose 4 percent to $27.8 billion in January-September 1971 compared with the same period a year ago. This rate of increase was substantially below the 13 percent gain recorded in 1970. The quarterly trend has been erratic, with a large advance in the first quarter being followed by a decline in the second and a sharp pickup in the third.

With foreign demand for U.S. products generally sluggish, the advance in nonfarm shipments was based almost entirely on transportation equipment. These exports increased by $1.1 billion over the first nine months of 1970 on the strength of larger aircraft sales and sharply higher automotive shipments to Canada. Civilian aircraft sales rose by $280 million to $1.4 billion. This increase of almost a fourth resulted largely from deliveries of jumbo jets to foreign airlines, especially in Western Europe. Sales of military aircraft were also sharply above last year's level.

Automotive products shipped to Canada during the first nine months were about 25 percent above the comparable 1970 level, with much of the advance representing a recovery in deliveries in the first quarter following the 67-day strike against General Motors. Strong auto demand on this side of the border spurred exports of parts and accessories to Canadian plants for incorporation into compact and subcompact vehicles to be sold here.

Modest gains in machinery

Sales of machinery rose only 4 percent in January-September, a substantial slowdown from the 15 percent export growth in 1970 and the slowest rate of increase in many years. Sluggish economic conditions abroad, coupled with an easing of demand pressures in this country's major markets, generally accounted for the weakened performance.

Shipments of electronic computers expanded by $46 million on the strength of increased sales to France and Germany. Deliveries of rolling mill equipment advanced by a half as continued expansion in steelmaking facilities in Latin America and Italy stimulated demand. Sales of compressors and temperature control equipment also rose.

Greater sales of electrical machinery stemmed mainly from increased exports of power machinery and switchgear to Latin America and Canada. Shipments of generators continued to rise, as did exports of motors, starters, and industrial controls. Sales of telecommunication apparatus increased because of greater deliveries of color equipment to the expanding television networks in Canada and Mexico. In contrast, exports of semiconductors fell 11 percent from January-September 1970 levels.

Sluggish industrial activity in Western Europe and Japan strongly depressed U.S. exports of metals and scrap. Continuing the general pattern of decline since mid-1970, steel shipments fell by two-fifths in value. The 47 percent decline in exports of steel scrap primarily reflected the reduction in steel production in Japan. The quantity of coal shipped—especially to Japan, West Germany, and Italy—also fell, although higher prices raised export values. Declining demand overseas and increases in foreign supplies combined to hold aluminum sales sharply below last year's levels.

Chemical sales expand

Recovering in the second and third quarters from the sluggish activity of 1970 and early 1971, chemical exports rose 7 percent above the January-September 1970 level. Shipments of nuclear fuel for newly completed atomic power plants in Germany,

Switzerland, and Japan accounted for much of the rise. Exports of plastics to Canada and the American Republics increased, but deliveries of organic chemicals remained sluggish.

Following last year's expansion, woodpulp exports fell as a result of weakened foreign demand. Log sales were depressed as Japanese demand fell and the West Coast dock strike reduced shipments. Deliveries of paper and paper products, on the other hand, have advanced 17 percent so far this year, with much of the increase going to U.S. subsidiaries in Europe.

Although exports of agricultural products moved in an uneven pattern by quarters, they reached $6.1 billion in the first nine months of 1971, 14 percent above the previous January-September level. Cotton shipments were $167 million above the January-September 1970 level. Soybeans continued in strong demand abroad and exports to Europe—particularly Germany, Spain, and Italy—rose briskly. The need to rebuild depleted inventories in Germany and the United Kingdom helped account for the sharp rise in U.S. sales of tobacco. Wheat shipments rose 16 percent in value; nearly one-third of the increase was in exports to Brazil, but loadings for the United Kingdom, Yugoslavia, and Romania were also higher.

Surge in consumer goods

Imports of consumer goods totaled $11.7 billion in January-September, 23 percent greater than in the same period a year ago. This rapid advance reflected the acceleration in U.S. personal consumption expenditures and a further increase in the share of U.S. markets claimed by foreign producers. In the first nine months of 1971, imports of consumer goods accounted for 5.4 percent of personal consumption expenditures (excluding those for food, gasoline, oil, and services) compared with 5 percent in 1970. This ratio has risen steadily each year since 1963.

Purchases of foreign automobiles led the advance in consumer goods imports with a 49 percent increase, climbing in each quarter to $2.1 billion for the nine months. In addition to the strong advance in current demand for foreign cars, imports were further stimulated by an inventory buildup to supply an expanding dealer network with newly introduced models and to stock up in anticipation of longshoremen's strikes. Despite booming sales of U.S.-made cars designed to compete with the foreign makes, imported autos other than those from Canada captured 16.9 percent of the U.S. market, up from 15.2 percent in 1970.

Arrivals of new automobiles from Canada climbed 31 percent over the comparable period of 1970 to $1.8 billion. Entries rose steeply in the first quarter, with General Motors plants back in production following a long strike. They maintained this high level through September as auto sales here improved considerably over last year.

Virtually all of this year's accelerated rise in clothing imports consisted of greater arrivals from Taiwan, Hong Kong, Korea, and Japan. Footwear imports also climbed strongly, largely reflecting increased purchases of leather shoes from Italy and Spain.

Entries of motorcycles, mostly from Japan, posted a climb of 50 percent. The increasing popularity of these vehicles for recreation and commuting has accounted for the rapid import rise in recent years. Purchases of television sets advanced one-fifth over last year's first nine months, but imports of radios showed no change.

Despite a slow recovery in U.S. industrial production, imports of industrial supplies rose sharply. These arrivals, which accounted for about one-third of the overall import advance, reached a total of $12.8 billion in January-September, an increase of 15 percent over last year at this time.

Steel-mill products contributed most to the advance in imports of industrial supplies. The sharp rise in arrivals in the first half largely reflected the heavy inventory buildup in anticipation of the July 31 expiration of labor contracts in the steel industry. Greater availability of steel abroad was also a factor in the increase. Four countries—Japan, Germany, Belgium, and France—accounted for two-thirds of the rise.

Arrivals of aluminum also increased steeply, mainly as a result of a potential strike in that industry. With contracts expiring on May 31, imports soared in the second quarter, then fell sharply in subsequent months after a strike was averted. The value of crude petroleum imports rose sharply through September as a result of larger quotas for Canada, declines in shipping costs, and higher prices. Inflows of residual fuel oil declined slightly from comparable 1970 levels in terms of quantity, but price increases boosted value by 14 percent.

Stepped-up construction activity in this

country, including a record level of private housing starts, was the major reason for a strong recovery in lumber imports. Purchases of plywood also rebounded from last year's depressed levels. Imports of textile yarns and fabrics posted another steep increase in January-September, led by large entries of manmade fiber products. Purchases of industrial and agricultural chemicals rose by nearly one fifth as coal tar intermediates and colors and dyes climbed.

Imports of capital equipment amounted to $3.7 billion in the first nine months, a rise of 11 percent over the same period of 1970. This was less strong than the advance recorded last year. Through September, imported capital goods comprised 7.2 percent of U.S. fixed investment in producers' durable equipment (excluding automotive products) compared to 7.4 percent last year.

The slower rise in capital goods purchases reflected the more subdued pace of machinery imports. These arrivals climbed 9 percent in the first nine months, half the rate of growth recorded in 1970. Entries of office machines, electric power machinery, and electronic components all increased at substantially reducted rates. Imports of metalworking machinery dropped again, reflecting continued stagnation in domestic demand for this equipment.

Purchases of textile machinery, on the other hand, continued to rise sharply. Especially strong were imports of knitting machines which produce the currently popular double-knit fabrics and which are available almost exclusively from Western Europe.

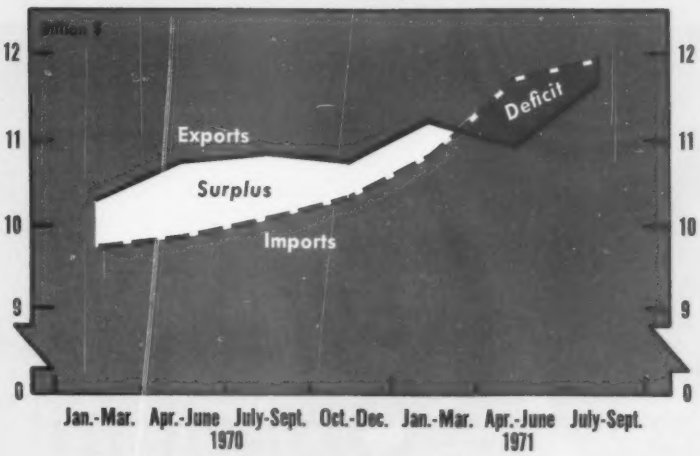
Most of the rise in imports of aircraft and parts was from Canada, though receipts from Italy also advanced. Deliveries of trucks from Canada increased after recording no change last year.

Food purchases climb

Imports of foods and beverages rose 11 percent over January-September 1970 to $5.1 billion. A significant portion of this increase reflected stockpiling prior to the longshoremen's strike at Atlantic ports. Imported foods accounted for 5 percent of U.S. consumption expenditures on food this year compared to 4.7 percent in 1970.

Entries of whiskey climbed by 20 percent and coffee was up 14 percent over last year's level as importers sought to expand inventories before the port shutdown. The advance in coffee was even greater in terms of quantity since lower prices held down the value.

U.S. Trade Deficit Appears This Year



Quarter-To-Quarter Percent Changes

		Exports	Imports
1970	1st qtr.	+3.1	+2.8
	2nd	+4.6	+1.5
	3rd	+0.5	+1.6
	4th	−0.8	+3.0
1971	1st qtr.	+4.5	+4.7
	2nd	−2.4	+8.9
	3rd	+6.5	+1.8

Fish imports rose again in value, but most of the increase stemmed from price increases as world supplies remained tight. Receipts of fresh beef were relatively unchanged.

With the exception of shipments to Canada, the Near East, and Africa which grew vigorously, exports to most areas expanded in the first nine months much more slowly than in the same period of 1970. The economic slowdown in Europe held sales to that region to only a 3 percent rise. After climbing by one third last year, sales to Japan declined in value by 12 percent through September. In contrast, imports from nearly every area were much stronger. Increases ranging from 16 to 22 percent were recorded from major industrial regions. Primarily as a result of higher volume and prices of petroleum, arrivals from the Near East were up by 50 percent.

The United States share of the world market declined sharply again this year, both for total exports and for manufactured goods. In January-June 1971 the U.S. share of foreign markets, excluding shipments to this country, stood at 17.6 percent for total exports and 20.7 percent for manufactures. By comparison, the shares were 18.6 percent and 21.9 percent, respectively, in the same period a year ago.

—Bureau of International Commerce

Aquaculture Industry Opening The Way For Hundreds Of Jobs

Ocean Farming May Be One Answer To Economic Success In Many Regions

LUMMI BAY VIEW—*An aerial view of Lummi Bay shows the 750-acre Lummi Aquaculture Project Ponds. The new industry involves scientific farming of a variety of fish and shellfish.*

The Pacific Northwest—hard hit by cutbacks in aerospace activity—is getting a new industry, with U.S. Government assistance.

The industry is aquaculture—the development, growth, and orderly harvesting under modern scientific methods of a variety of marine products, mainly fish and shellfish.

Far out in the forefront of this new undertaking is a water-farming project that is being established on the reservation of the Lummi Indians, a peninsula located about five miles west of downtown Bellingham, Washington, and bounded on the east by Bellingham Bay and the Nooksack River and on the west by the Strait of Georgia and Hale's Passage.

Because of the widespread interest excited by the Lummi project, plans are under consideration for its expansion through many parts of the surrounding area. Strong opposition arose to the project at the outset, both within the tribe and from the neighboring white landowners. While the opposition has not been quieted, it is said to have declined. Meanwhile, the State of Washington has given top priority to aquaculture. The State Department of Natural Resources has

UNLOADING TROUT—*Lummi trainees are shown unloading fingerling trout into culture ponds. The heart of the aquaculture project is a series of ponds and dikes for the new fish and shellfish culture.*

formulated an outline for an aquaculture program over the next 10 years at the end of which the State expects to gross about $60 million a year from the sale of marine products.

Throwing off poverty

The project has given a new lease of life to the once-prosperous Lummi Indians, inspiring them with the hope that they can throw off their chronic poverty and rise to new-found affluence. And the Indians have responded to the prospect with exceptional energy. The Lummis may become teachers of other tribes. It is believed that about 10 tribes in the Puget Sound area, and dozens of tribes along the Alaskan coastlines, could profit from the Lummi venture, and many of them are said to be watching it. Word of the Lummi "better mousetrap" has filtered to the Seminoles and other Indians of Florida, who are said to have asked for Lummi collaboration in developing the potentials of aquaculture.

However, there is one requisite of successful aquaculture that is both a problem and an incentive, and that is good-quality water. Pollution from municipal and industrial wastes, and oil spills, such as from a wrecked tanker, are an ominous hazard. Thus, a thriving aquaculture program is an economic club in behalf of clean unpolluted water.

In return for clean water, modern science in aquaculture offers rewards apart from economic growth. For example, demonstrated or hoped-for accomplishments of the Lummi project include the following:

Superior and tasty oysters that can be served in top condition the yeard round, and not merely during the "R" months. Excellent fish, including pan-size silver salmon, said to be better in flavor and texture than rainbow trout. Pink-fleshed fish, especially salmon, for those who prefer it. Eggs of sea urchins, a delicacy well known to the Japanese and to the Lummi Indians, but new to most Americans.

From 1969 to the present, Commerce's Economic Development Administration (EDA) has authorized grants totaling $2,337,220 to assist in carrying out the Lummi project. These funds are part of more than $100 million which the EDA has approved to assist Indians and Eskimos with economic and related problems. The projects span the whole gamut of human activity from water and sewer systems to cattle fencing.

Aid for Indians is authorized under a special provision of the Public Works and Economic Development Act. The provision

FISH DISEASE CLASS—*Margie James (left front) and Dorothy Sansom are shown transferring bacteria cultures in the Aquaculture Training Program lab. Trainees in background are preparing chemicals.*

qualifies Indian communities for assistance without reference to the statistical criteria for unemployment and family income established by the Act for most projects. Assistance is granted to promote economic growth and development in individual problem situations, to test new means of solving local problems, and to relieve or avert unemployment. Eskimos are classed as Indians for the purpose of the Act.

EDA has approved funds for two other Indian aquaculture projects: a $98,975 grant to help develop fish resources and create jobs for Quinault Indians on their 190,000-acre reservation north of Aberdeen, Washington; and $168,767 for a project intended to benefit the Seminoles in Florida.

The Lumni project emerged when Dr. Wallace G. Heath took leave from his job as associate professor of biology at Western Washington State College in 1968 to develop a program for the tribe under a Federal grant. After rounds of consultations with Indian leaders and others, he proposed an aquaculture plan.

The Lummis are a community of about 2,000 people, half of whom live on or near the reservation and half within the immediate environs. The Indians control 7,618 acres of land and about 5,000 acres of tidelands. They also have legal rights over the water of the Nooksack River by which pollutants drift into Bellingham Bay.

The tideflats adjacent to the reservation traditionally have been regarded by the Lummis as their main resource. Tribal spokesmen say the reservation lands are unsuited for farming. Salmon fishing has been the tribe's main income producer, and the Lummi Business Council reports that it has been on the decline.

One advantage of the project is that it offers many Lummis an opportunity to return to the reservation, where according to all accounts most of them would prefer to be if jobs and income were available. A number of skilled and trained Lummis are said to be returning to the reservation, and others are writing to ask about employment prospects at home.

More jobs

In the present stage of development, the project offers prospective jobs for more than 200 Indians when it is in full operation.

Dr. Heath says that gross income from the project should reach $2 to $3 million annually by 1974. For a small Indian community, this would mean a per capita income boost of $1,000 to $1,500 a year.

Aside from the community-wide incentive for clean water, the Indians have proclaimed their intention of pressuring industry, and State, county, and city governments to reduce pollution. Water quality studies previously initiated are to be expanded.

The main features of the project are a 750-acre pond in the tidelands, an oyster hatchery near the pond, and a fish hatchery in the Nooksack River 35 miles away in a mountainous area free of pollution. The pond, which is enclosed by dikes, has been completed and is filled with water. Dr. Heath says the fish hatchey should be finished in January, and the oyster hatchery by next May.

The pond is equipped with inlet and outlet gates, so that sea water can flow into the pond at high tide and out at low tide, thus bringing in clean water from the sea and flushing out the pond. The water flows in and out through screens, thereby keeping out undesirable marine life and preventing loss of what is in the pond.

Dr. Heath says there are about 25 million seed oysters in the large pond at this time, and about half a million fish in this and other ponds. By next spring, he adds, there should be about two million trout and salmon in the ponds. The fish hatchery, he predicts, should produce five to 10 million fish annually. The oyster hatchery will have a capacity of about 100 million seed oysters a year.

The plan, Dr. Heath explains, is to grow about half of the fish in the big pond and release the remaining half into the sea for

migratory runs. Those to be grown in the pond will be silver salmon and the Donaldson "super-trout"—a hybrid of steelhead and rainbow trout—and rainbow trout that have been converted to a life in sea water. Fish released into the sea will consist of silver, Chinook, pink and chum salmon.

Year-round oysters can be provided by rafting pond oysters into deeper and cooler water areas, where they can retain their high quality during the summer months. Four kinds of oysters are to be grown in the pond —Pacific, Kumamoto, Eastern and European.

The oysters to be grown are cultchless oysters. This is an oyster, said to be superior in quality, that is not grown on oyster shell beds or other material laid down as points of attachment. Work is being done on special plastic trays on which the oysters may be grown by suspension in the pond. This will permit planned and orderly feeding, and make it possible to produce a half-shell oyster in two summers, much sooner than by the natural tidal feeding.

"We are doing some test marketing," reports Larry Kinley, tribal Business Manager. "The project should sell about 300,000 pounds of fish and oysters—about half and half of each—in 1972 and 1,500,000 pounds the following year."

In addition to fish and oysters, the big pond will produce clams, mussels, marine worms for fish bait, and economically valuable algae or seaweed naturally. Sea urchins also are a native product of the bay areas. Experiments are continuing on using special food supplements, such as waste shrimp and shells, to produce pink-fleshed fish. Red seaweed is harvested throughout the San Juan Islands, original home of the Lummis. It is used to make carrageenin, a highly valuable substance that acts as a stabilizing or thickening agent in the production of many articles, such as toothpaste, ice cream, chocolate milk, puddings and cake icings. Dr. Heath says possibilities are being explored of brown and green edible seaweeds that are far more valuable economically than the red product, and that there is a prospective export market for this material.

A vital feature of the Lummi project is the training program. The third training program is now under way in which Indians are trained for one year in all phases of aquaculture. In the second program completed in September, 64 individuals were in training, of whom 58 graduated. Their ages ranged from 19 to 63. Dr. Heath says more than 90 percent of the trainees attended classes 90 percent of the time. In 1968, three Lummis were in college, and in the present school year there are 25.

LAB WORK—*Steve Adams (left) and Ernie Paul measure dissolved oxygen levels from water samples from the Lummi ponds, a part of water farming.*

There is more than economics in the undertaking for the Indians, because they see in it a hope for recovery of ancient tribal pride when their people were alone and well off with the bounty of the sea, and knew from tradition how to deal with their great resource so that it would reward them.

Future expansion

The project will be tried out on the present basis for the next few years, says Samuel Cagey, chairman of the Lummi Indian Tribal Enterprise, and if it prospers and the marketing of its products goes well it may be expanded. When it is firmly established, it is to be taken over by the tribe. There is hope that the project eventually can be enlarged to 2,500 acres or more of ponds in the tidelands, and that 600 jobs can be provided for the Lummis. Indian leaders in the promotion and development of the project are Cagey, Kinley, and Vernon Lane, Chairman of the Lummi Indian Council.

Dr. Heath pays high tribute to the Indians for the progress that has been made, pointing out that they have worked tirelessly for long hours to make the project a going concern. He recalls that Lummis who dropped out of school in the fourth or fifth grades have developed into excellent technicians, and that others have become capable business and office managers. "It could not have been done by non-Indians," he says.

—Economic Development Administration

Soviets Assure Patent Protection For American Technology Marketing

Exchange Visits Between Experts Of 2 Nations Find USSR Eager To Promote Industry Contacts

A potential market exists in the Soviet Union for non-strategic U.S. technology and the USSR has provided new assurances of patent protection for U.S. companies interested in marketing this technology.

This determination is made as a result of exchange visits earlier this year between Soviet and American business and patent experts. The U.S. delegation found that Soviet Government officials are eager to promote contact between the industry of both countries and are much interested in reaching exchange agreements on industrial and commercial technology.

These findings—and others—are reported in a recent special edition of *les Nouvelles*, a technical journal of the Licensing Executives' Society.

Purpose of the visits was to explore the possibilities of establishing procedures for licensing U.S.-owned Russian patents directly to industrial users in the USSR.

The visits were sponsored by Commerce's Patent Office and the Licensing Executives' Society, Inc., and by the Committee for Inventions and Discoveries in the USSR. Heading the U.S. delegation was former Patents Commissioner William E. Schuyler, Jr. Other members of the U.S. group included Dudley B. Smith, Licensing Coordinator, Celanese Corp., New York City; Kenneth W. Brown, Patent Counsel, Cabot Corp., Boston; Homer Blair, Director of Patents and Licensing at Itek Corp., Lexington, Mass.; and E. P. White, Manager of International Licensing, Aluminum Company of America, Pittsburgh.

Although the U.S. delegates' visit to the USSR was part of a 12-year-old series of Soviet-U.S. cultural exchanges, it is the first time a cultural exchange has occurred in the patent field. Patents and patent licenses are a product of western culture. They provide an incentive by which progress in science and technology is encouraged by Government through the grant of an exclusive right to an inventor in exchange for the public disclosure of the invention.

Soviets eager to share

It is only in recent years that the USSR has even been a member of the international treaty on patents, the so-called Paris Convention. Nevertheless, U.S. delegates found the Soviets eager to share patent and licensing experiences.

Soviet industry is required by government decree to avoid infringement of any USSR patent and extensive searching procedures

are applied to make certain that any innovative development by Soviet industrial concerns will be free of domination by adversely-owned USSR patents as well as by competitive foreign patents which might affect the export of this technology from the USSR.

While ownership of Soviet patents is not a prerequisite for the sale of technology to the USSR, the existence of patent protection on at least some segment of the technology sold has some influence on the amount of compensation which can be obtained from the license. A significant point of interest is that the Soviet government seems convinced of the important role of its patent and inventors certificate system in increasing the development of Soviet technology and is devoting substantial effort to capitalize on it.

MOSCOW CONFERENCE—*The U.S. patent delegation is shown at one of its meetings in Moscow across from representatives of the Soviet All Union Chamber of Commerce. Facing the camera (from left), Dudley B. Smith, Kenneth W. Brown, William Harbin of the U.S. Embassy, William E. Schuyler, Jr., E. P. White, and Homer Blair.*

During its Soviet visit, the U.S. delegation obtained assurances that efforts will be made to improve channels of communication and to bring U.S. businessmen into direct contact with Soviet industry that may be interested in technology being offered by U.S. companies.

The acquisition and use of foreign technology could be important to achievement of the USSR objectives as reflected in current five-year plans. Such technology may be included in contracts for turn-key operations, licensing or sale of unpatented know-how for use in existing or planned facilities, and licensing or sale of patented inventions. Soviet patents will be extremely valuable to U.S. business if Soviet industry desires to use the invention.

Under the Soviet system, when a patent is granted, Soviet industry is not permitted to use the invention unless it is licensed. Since all industry is under Government control, infringement of a patent is not permitted. There has not been enough experience under the Soviet patent system to know how controversies will be resolved, but, at the present time, there is no forum in which the issue of validity will be questioned. If a patent is obtained, and Soviet industry can be interested in the invention, a license seems to be assured.

In the Soviet organization, there are large numbers of research institutes, the work of which is coordinated according to the national plans. A great deal of advanced technology is being developed in these research institutes which may be of interest to U.S. industry. With the facility of U.S. industry in applying technology, the opportunities to exchange advance Soviet technology for U.S. applied technology may reach the point of joint ventures. At least, exchange agreements can be contemplated for the future.

The Licensing Executives' Society has published a comprehensive report on the operation of the Soviet system and on the business opportunities which it might offer to interested U.S. firms in its newsletter *les Nouvelles*. Copies are available at $2 from Mrs. Thelma C. Heatwole, Licensing Executives Society, Inc., 5110 West Franklin St., Richmond, Va., 23226.

As pointed out by the newsletter, "the only route by which a foreigner can obtain a patent is through the USSR Chamber of Commerce which is the applicant's sole agent for filing and prosecuting the application. Contact with the Chamber of Commerce is similar to that with a patent agent in any other foreign country. The C of C is in a sense a private company and profit motivated in that it receives fees for all of its services including those which extend beyond patent activities. It also undertakes the filing and prosecution of patent applications on Soviet inventions abroad."

If initial contacts can be established and enlarged, it appears likely that an exchange of technology between the U.S. and USSR can be mutually beneficial to the industry of both countries.

Companies interested in pursuing this matter may obtain assistance and guidance from Commerce's Office of Export Control, Bureau of International Commerce.

—Patent Office

DOMESTIC BUSINESS REPORT

- Phase Two Machinery in the works
- Spanish-American status grows
- NEDA triumphs in first year
- More young singles today
- Population vs. ecology

Phase Two Machinery Set In Motion

The brightest economic hope of the Nation, according to Secretary Stans, rests upon the success of Phase Two of the President's economic program.

The Secretary said that the "fundamental goal of President Nixon's new economic program is to blunt the forces of inflation, to reduce unemployment, and to re-establish our competitive strength in the world at large."

Two factors

He added that the "success of the program depends upon two factors —fairness on the one side, public support on the other; limited wage and price restraints will work only if business and industry really want them to work, if labor unions really want them to work, and if the public really wants them to work."

Stans also commented that "American management, for its part, must recognize that it has never been more urgent to modernize plant and equipment, and never been more advantageous to do so.

"Either we must increase American productivity by better machines, better methods and better products, or adjust to a new role in the world, changing from the greatest productive industrial super-power of today into a service nation of indefinite strength in the future."

While the Secretary was making these statements this month in New York City before a meeting of the West Side Association of Commerce—in Washington, D.C., the Pay Board and the Price Commission were meeting to decide on the answers to crucial questions concerning wages and prices for Phase Two.

Guidelines for Phase Two of the Economic Stabilization Program were issued Nov. 13 by the Cost of Living Council, the Pay Board and the Price Commission.

The guidelines established the economic units and transactions which are covered in the post-freeze economic stabilization period. They also established categories of economic units in the U.S. economy which must comply with the prenotification, reporting and other procedural requirements prescribed by the Cost of Living Council.

The key figures established by the agencies are: 5.5 percent for wage increases, 4 percent for dividend increases, and 2.5 percent as an average for price increases. The latter figure, however, is an overall goal and is not used as a yardstick for individual price increases.

In general, a company is not permitted to raise prices above the *base price* (the price prevailing during the freeze) except to allow for new and anticipated cost increases, and any cost increase must be adjusted for productivity gains. However, prices cannot be raised

to a point where they would increase a firm's profit above the *base period* level. The base period is defined as the average of any two of the past three fiscal years ended before August 15, 1971.

Company profits

Thus, a company that raises prices could only increase its total profit by increasing sales because a ceiling would be set on its profit margin; on the other hand, a company that did not raise prices could increase its profit margin per sale.

It is expected that some prices and rents will rise, some will remain unchanged and some will decline, and that over a year prices will *average* about 2.5 percent higher.

The Committee on Interest and Dividends, headed by Federal Reserve Board Chairman Arthur Burns, established the principle of holding increases in dividends in 1972 to 4 percent above the *base period.* In this case, the company could use any of the three most recent fiscal years as its *base period.*

Three economy sections

In its formal outline of Phase Two regulations, the Cost of Living Council divided the economy into three tiers. The largest firms and labor units were placed in the first category. They must notify the government before making any price or wage adjustments. Those firms and labor units in a middle category must keep comprehensive records and report any wage or price adjustments to the Council. The third category of firms and labor units does not need to prenotify or report wage or price adjustments, but these firms and units must keep adequate records, subject to monitoring or spot checks by the Internal Revenue Service.

For price adjustment considerations, a category I firm is a firm with annual sales or revenues of $100 million or more; a category II firm is one with annual sales or revenues from $50 million to $100 million; and a category III firm is one with sales or revenues below $50 million. For pay adjustment classifications and procedures, category I means a pay adjustment which applies to or affects 5,000 or more employees; category II affects from 1,000 to 5,000 employees; and category III is considered those units affecting less than 1,000 employees.

The Cost of Living Council left the door open for reclassification of business firms or labor units.

FACING THE NATION—*George H. Boldt (left), chairman of the Pay Board, and C. Jackson Grayson, Jr., chairman of the Price Commission, are shown during a television interview, explaining the Phase Two guidelines set up to carry out the post-freeze Economic Stabilization Program throughout the Nation.*

Wage yardstick

The yardstick for measuring wage increases, as set out by the Pay Board, was established as a 5.5 percent annual increase. While setting down this percentage as a general wage and salary standard, the Pay Board also said that the appropriateness of this figure would be reviewed periodically in the light of productivity and price trends.

The Pay Board also noted that existing contracts and pay practices previously set forth would be allowed to operate according to their terms, except that all specific contracts or pay practices would be subject to review when challenged by a party at interest or by five or more members of the Pay Board.

In setting up its guidelines for price and rent stabilization, the Price Commission adopted policies designed to achieve a goal of holding average price increases across the economy to a rate of no more than 2.5 percent a year.

According to the Price Commission, it expects that, in view of the excellent record of cooperation during Phase One, business will voluntarily comply with its guidelines and regulations.

The Internal Revenue Service division of the U.S. Treasury Department has deployed 3000 persons in 300 offices throughout the Nation to handle inquiries concerning the new rules and regulations of Phase Two.

The initial rules and regulations have been set forth in the *Federal Register,* Volume 36, Number 220, Part III, "Cost of Living Council, Pay Board, Price Commission. Economic Stabilization."

Ground-Breaking Study Details Spanish-American Status In U.S.

American families of Spanish origin have greater income than blacks, but both groups earn far less income than whites, according to a new census study.

First study

The Census Bureau's first comparative study, based on information from a nationwide sample survey in March, shows median income in 1970 was $7,330 for families of Spanish origin, $6,280 for black families, and $10,240 for all white families.

Blacks have more education than Spanish-Americans, but both groups dominate the blue collar jobs. The study found that among persons 25 to 29 years old, approximately 48 percent of the Spanish-Americans had graduated from high school. Fifty-eight percent of the blacks and 80 percent of all whites were high school graduates. About one in five persons of Spanish origin over 25 years old had completed less than five years of school, compared with one in 25 whites.

About 97 percent of the persons of Spanish origin were classified as whites in this survey. They include those who identified their origin or descent as Mexican, Puerto Rican, Cuban, Central or South American or other Spanish.

Fewer white collars

Men of Spanish origin and blacks were less likely to be working in white collar occupations than were white men, according to the study. Forty-four percent of the white men held white collar jobs while about 23 percent of the men of Spanish origin and 22 percent of the black men were white collar workers.

Income for men

Median income of men of Spanish origin was $6,200; lower than the $8,200 median of white men, but higher than the $5,000 median of black men.

A larger proportion of women of Spanish origin remained in the home, but those who entered the labor market had the same median income as white women, $2,600. Thirty-nine percent of women of Spanish origin between 16 and 64 years old were employed. This contrasts with 49 percent of white and 53 percent of black women who were employed. Median income for black women is slightly lower.

Additional findings

Other findings of the report included:

—Unemployment rates for Spanish-Americans were higher than the national average and about the same as for Negroes and other minorities.

—Men of Spanish origin were less likely to be divorced than black men. For every 1,000 men of Spanish origin currently married, there were about 25 divorced. For every 1,000 black men currently married, there were 60 divorced.

—Spanish origin families were larger than white families. About six percent had six or more children, while less than two percent of all whites had families that large.

—Some nine million persons identified themselves as being of Spanish origin. Five million were of Mexican descent and 1.5 million Puerto Rican.

—Approximately 46 percent of the Spanish-Americans were under 18, compared with about 35 percent of the total population.

—Census Bureau

Median Family Income In 1970, By Age of Head and Ethnic Origin: March 1971

Age of head	Total population			Spanish origin	
	All races[1]	White[2]	Negro	Total[3]	Mexican
Total	$9,867	$10,236	$6,279	$7,334	$7,117
14 to 24 years old	7,037	7,294	5,013	5,697	5,534
25 to 34 years old	9,853	10,187	6,605	7,324	7,567
35 to 44 years old	11,410	11,790	7,569	8,345	8,058
45 to 54 years old	12,121	12,626	7,357	8,146	7,491
55 to 64 years old	10,381	10,737	6,438	7,482	7,997
65 years old and over	5,053	5,263	3,282	3,756	(B)
Head year-round, full-time worker:					
Median family income	$11,804	$12,016	$8,880	$9,309	$8,946
Percent of all families	64.1	65.5	51.4	57.4	57.0

B Base less than 75,000.

[1] Includes persons of "other races," not shown separately.

[2] Includes almost all persons reporting Spanish origin. About 97 percent of persons of Spanish origin, about 99 percent of persons of Mexican origin, and 96 percent of persons of Puerto Rican origin were classified white in this survey.

[3] Includes persons of Central or South American, Cuban, and other Spanish origin, not shown separately.

Note: The following groups were not shown separately by age because of small sample size: Puerto Rican, Cuban, Central South American, and other Spanish. Median earnings for all families and families with head working year-round, full-time is shown below by origin:

Ethnic origin	All families	Head worked year-round, full-time
Cuban	$8,387	$9,546
Puerto Rican	5,975	8,829
Other Spanish (including Central and South American)	8,774	10,582

BUSINESS DEVELOPMENT DISCUSSED—*Representatives of National Economic Development Association and Commerce officials shown reviewing problems of Spanish-speaking businessmen in the United States are (from left) NEDA president Frank D. Veiga, Under Secretary of Commerce James T. Lynn, Hector Vasques, acting chairman of NEDA, and OMBE Director John L. Jenkins.*

Group Stimulates Record Growth For Spanish-Speaking Businessmen

Business development activities of the National Economic Development Association produced 1,100 business loans, contracts and bonding guarantees—either approved or pending approval—totalling more than $57 million in slightly more than a year of its existence.

Members of the board of the Los Angeles-based national organization which promotes business opportunities for Spanish-speaking Americans were commended by Under Secretary of Commerce James T. Lynn at a recent luncheon in Washington.

"NEDA's action has been of significant benefit to Spanish-speaking Americans wishing to participate in America's competitive enterprise system," Lynn said, "and is an excellent example of how interested groups and individuals from the private and public sectors can join with government in President Nixon's program to create opportunities for members of minority groups to enter into business."

The organization was incorporated in June 1970 to provide encouragement and coordination to members of the Spanish-speaking community wishing to enter into business or expand existing ones. Its first year of success has generated a proposal to expand its nine regional offices to cover 28 areas of the country.

NEDA's effectiveness, according to the proposal for expansion, lies in its financial assistance packaging capabilities and its delivery system. The organization's strong identification and involvement with the Spanish-speaking community could be utilized as an effective liaison and "shepherd" for other EDA projects.

The NEDA procedure communicates the intent of the program. It identifies the individual needing assistance and leads him through the maze of business requirements. Technical assistance actually hand carries the potential entrepreneur from his expression of interest to the preparation of the financial assistance package to the securing of his initial loan capital and the continued support of technical, managerial assistance.

NEDA officials have expressed the opinion that the delivery system, the direct contact of the program with the individuals, is an element all too frequently missing from otherwise well conceived programs.

The NEDA delivery system reaches and involves the individual and does so successfully.

Business assistance

Regional staffs assist in preparation of loan applications including profit and loss and projected earnings statements. They assist in identifying and evaluating markets, in reviewing lease and franchise agreements and in providing other accounting and legal assistance. They also help the prospective businessman in presenting his application to the lender and provide volunteer management and technical counsel on a follow up and continuing basis.

The Under Secretary presented certificates to nine of NEDA's chapters, naming them Associate Offices of the Department of Commerce. They were Albuquerque, Chicago, El Paso, Kansas City, Kan.; Los Angeles, Miami, New York, Phoenix, and San Antonio. NEDA recently established additional chapters in New Orleans, San Jose, Santa Fe and Tucson.

The chapters receiving Associate office certificates are also affiliates of the Office of Minority Business Enterprise. NEDA is financed through funds of the Economic Development Administration and the Small Business Administration.

The board, comprising prominent business leaders and professionals of Hispanic descent, has as its acting chairman, Hector I. Vasques, also executive director of the Puerto Rican Forum, Inc., New York. President of NEDA is Frank D. Veiga, president of Veiga-Robison Mortuaries, Inc., Los Angeles.

—Office of Minority Business Enterprise

UP WITH THE CURTAIN—*Secretary Stans is in Russia now to explore the potential for expanded commercial and trade relationships between the U.S. and the Soviet Union, including the possibilities for more Russian tourism to the United States. As a prelude to the Secretary's visit, the United States Travel Service's six-story air-supported theater made its Russian debut last month in Leningrad. The "balloon theater" was part of the USSR's SYSTEMOTECHNIKA '71 exposition—the largest showing of Western-produced computer and office equipment ever held in the Soviet Union. Showing a keen interest in the USA, more than 41,000 citizens of the USSR visited this U.S. exhibit during the 10-day fair, and had the opportunity to look at its optical projection and audio system, representing a highly sophisticated level of synchronization technology. Walt Disney Productions technicians accompanied the theater to Leningrad to explain the complex system, which features nine screens, nine projectors and nine inside speakers, for presenting a 360-degree Circle-Vision, color-sound Disney film, "America the Beautiful." The Leningrad appearance was the second stop on a worldwide tour for the USTS exhibit.*

Business Market For Singles On Increase In Under-35 Age Group

Single is the popular status of the under-35 crowd, but the over-35 generation reverses this trend and continues to favor matrimony, according to a new census survey.

Young staying single

A March 1971 Census Bureau study found that there are more young singles today than 10 years ago. Fifty-six percent of the men and 45 percent of women in the under-35 generation were single. This is an increase since the 1960 census of 5 percent for men and 8 percent for women.

By contrast, the study showed the age group over 35 has continued a long-term increasing tendency to marry, reducing its proportion of single men and women. Six percent of women and 7 percent of men in this group were single at the time of the survey.

The majority of divorced men and women maintain their own households and about five times as many divorced women as divorced men were heads of households with children or other relatives present, the report notes. Forty-two percent of divorced men and 28 percent of divorced women live alone.

Although a large majority of persons over 65 years old do live with other family members—nearly 80 percent of the men and 58 percent of the women—the report notes that more older people are maintaining their own households.

From 1961 to 1971, there was a decrease in the proportion of persons over 65 years old living in families of which they were not the head or wife of the head. For men, the reduction in this category was from 11 to 7 percent. For women, the drop was from 22 to 15 percent.

At the same time, there was a corresponding increase in the proportion of men and momen who have kept up their own households and live apart from any relative. For men, the figure rose from 12 to 15 percent during the decade, while for women there was an increase from 28 to 36 percent.

Report available

Copies of the report, "Marital Status and Living Arrangements: March 1971," P-20, No. 225, are available for 50 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, or from Commerce Department field offices in major cities.

—Census Bureau

Slowing Population Growth Is Not The Answer To Ecology Problems

"The environmental problems of this Nation are and will be much more a matter of geographic distribution and the way we use our resources than the rate of increase in our total numbers," Dr. George Hay Brown, director of the Bureau of the Census, has stated.

Population and ecology

Dr. Brown discussed "Population and Ecology" at a meeting of the National Association of Manufacturers' Environmental Quality and Conservation Policy Committees.

"Two thirds of the rise in expenditures for goods and services and the concomitant increase in pollution, transportation and other problems that go along with it, would result even if our population stopped growing right now but continued to increase its income and to spend its money in the same way," Dr. Brown said.

Asserting that the United States is the "first country in the world to experience mass affluence," Dr. Brown said "the question we all face is whether this affluence will bring about greater air and water pollution, more wasting of our natural resources, gadgetry gone wild, more crime, more narcotics and more and more excesses."

"Or will we use our increased affluence to pay for pollution free cars and airplanes; clean rivers, lakes and streams; for better schools, for reforming penal systems and institutions; for the gamut of public services and needs," he added.

He expressed optimism that the job of pollution control can be done by the concerted effort of people, industry and government.

"It will take time. It will cost money. It will require new technology. But everything I see indicates that it can be done," the Census Bureau director asserted.

Noting that census studies show Americans prefer the metropolitan areas, Dr. Brown stated that in this country two persons out of every three now live in metropolitan areas and, in recent years, practically all growth in metropolitan areas was in the suburban ring.

The Census Bureau has begun to identify possible alternative growth centers, Dr. Brown added.

He made the following points on distribution of population and affluence:

—Between 1960 and 1970, central cities as a whole grew about 5 percent while the suburban ring soared in population by 28 percent.

—The Negro population is now more heavily concentrated in the central cities and the affluence in the suburbs.

—As of last year, in metropolitan areas, whites whose annual incomes were under $5,000 lived inside and outside the central cities in almost 50 percent proportions. When incomes were over $15,000, the percentage stood 34.4 percent in the city, and 65.6 percentage in the suburbs.

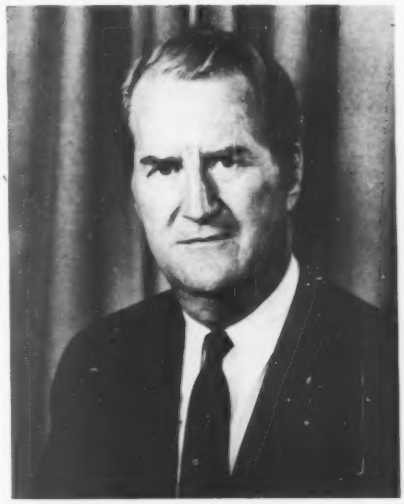
—Nearly 75 percent of the blacks live in the central cities and unless there is a radical reversal in trends observed in the decades of the 1950s and 1960s, one-third of the central city residents will be black in 1985. Today, one-fifth are black.

Income to double

Dr. Brown projected that real income will double during the next decade and a half. Adjusted median family income is expected to rise from $10,200 today to $15,300 in 1985, measured in 1969 dollars of constant purchasing power.

"Because of the combined impact of both income and population growth, the number of dollars in constant purchasing power (at the over $15,000 income level) will be about 3.2 times as great as it is today," he asserted further.

Most of the added purchasing power will occur in the 25-44 age group.



Dr. George Hay Brown
Census Bureau Director

Dramatic rise

There will be a dramatic rise in the number of younger adults from now until 1985, he continued. One-third of the expected total population increase will be in the 25-34 age group.

"This means the next 15 years will be the era of the young marrieds," he continued. It means a rapid rate of household formations. It is likely that two million new dwelling units per year will be needed to accommodate new families and replace worn out housing units. And much of the eventual demand will be for private homes rather than apartments.

"The so-called population bomb is being defused," he concluded. "Our population is expected to be somewhere between 240 and 250 million Americans by 1985 and somewhere around 280 million by the year 2000, and the Nation will have far more affluence than any society has ever seen."

—*Census Bureau*

Chemical Shipments Score Modest Gains

Shipments by the chemical industry in the first few months of 1971 showed only moderate increases over the same period of 1970, although some pickup was in evidence in the early spring.

This was the picture for the industry given in a quarterly industry report on chemicals prepared by Commerce's Bureau of Domestic Commerce.

First five months

The report showed that in the first five months of 1971 shipments of chemicals and allied products totaled in value $21,442 million, a gain of 4.7 percent over the same period of 1970. However, shipments in April and May were valued at $8,713 million, an increase of 7.3 percent over the same 1970 months.

This indicated that, despite the sluggish recovery in the first few months of the current year, the total figures for the year may be more in accord with the 6 to 7 percent average gain of recent years.

The modest rise in shipments in the first few 1971 months was due to a reduction of inventories rather than increased production, according to the indicators. The production index as of March was only 1 percent ahead of the December, 1970, rate.

Exports through April, 1971, were about $70 million below the same 1970 period, while imports were about 11 percent higher. The report indicated that, while 1971 exports are expected to be higher than in 1970, there will be little if any gain in the favorable chemical trade balance.

New profits after taxes for the chemicals and allied products industry rose from a low of 5.5 percent in the fourth quarter of 1970 to 6.2 percent in the first 1971 quarter. The after-tax rate of return on stockholders' equity was 11.7 percent in the first 1971 quarter compared to 10.3 percent in the fourth 1970 quarter.

Industry's needs

The report showed that industry's demand on petroleum for chemical raw materials increased 3.6 percent in 1970 over 1969, which was considerably below the long-term average annual gain of more than 10 percent.

Liquefied gases from natural gas provided the chemical industry with 53.5 percent of total needs from petroleum raw materials in 1970, a gain of 4.8 percent over 1969. Refineries in 1970 supplied liquefied refinery gas for chemicals production amounting to 11.1 percent of total chemical demand, a drop of eight percent from 1969. Petrochemical feedstocks were up 7.4 percent from 1969, providing 35.4 percent of total chemical demand on petroleum raw materials.

—Bureau of Domestic Commerce

Industrial Instruments Export More In '71

U.S. exports of industrial process instruments increased 3 percent in the first six months of 1971 over the corresponding period of 1970.

Commerce's Bureau of Domestic Commerce reports that in the first half of 1971 exports totaled $77,468,000 in value compared with $74,970,000 in the first half of the previous year.

In the general instruments category, however, shipments of electronically-actuated process instruments rose 18 percent, while shipments of mechanically and pneumatically-actuated process instruments increased five percent.

However, this optimistic showing was partially offset by a 10 percent decline in exports of parts and accessories, a category that includes sustaining shipments to foreign affiliates of U.S. manufacturers.

—Bureau of Domestic Commerce

Calendar For Businessmen

Dec. 5-10—University of Illinois—Basic Industrial Development Course of the American Industrial Development Council. For information, AIDC, Boston (617-536-6377), or Dr. Howard Roepke, Urbana. (217-333-1322).

Dec. 14-16—New York—First annual Business Financing Conference, co-sponsored by Business Week and Corporate Financing magazine. For information, Suite 910, 140 Cedar St., New York, 10006.

Jan. 16-19—Miami Beach—1972 National Exposition for Food Processors, sponsored by the Food Processing Machinery and Supplies Association. For information, sponsor's executive office, 7758 Wisconsin Ave., Washington, D.C., 20014 (301-656-5724).

Jan. 21-23—New York—78th annual convention of Northeastern Retail Lumbermen's Association. For information, the Association, 339 East Ave., Rochester, N.Y., 14604 (716-325-1626).

Ombudsman For Business

Businessmen who need assistance in their dealings with the Federal Government now have a central office in Washington, D.C., to write or call for information, suggestions, or even for registering complaints—the Commerce Department Ombudsman for Business.

All inquiries should be addressed to the Ombudsman, Thomas E. Drumm, Jr., Special Assistant to the Secretary, U.S. Department of Commerce, Washington, D.C. 20230, or call 202-967-3178.

SCIENCE & TECHNOLOGY REPORT

- **Undersea research to probe fish behavior**
- **Cloud seeding tests begin over Lake Erie**
- **Stereo aerial color photos published**
- **Mariculture feasibility study set in Hawaii**
- **Patents of special interest**

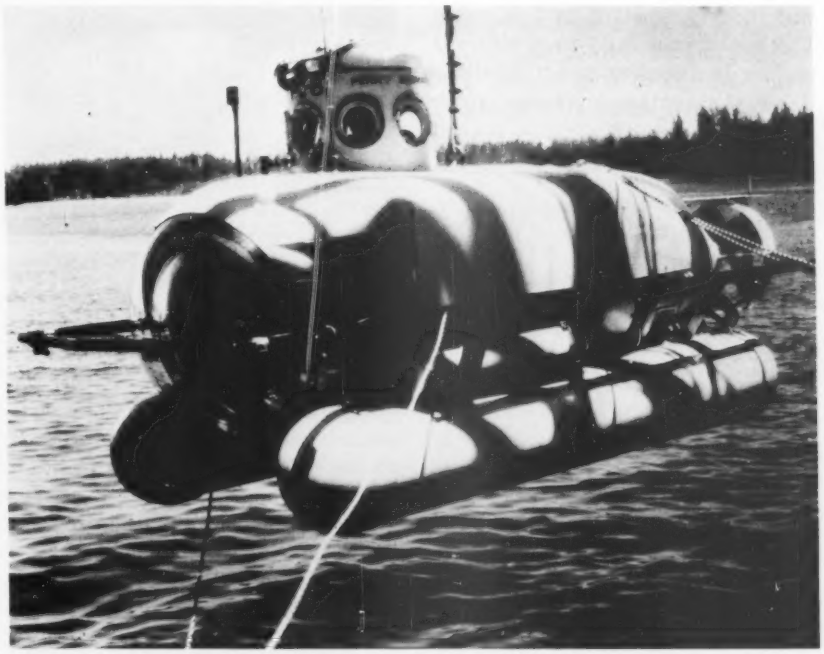
Undersea Research To Probe Fish Behavior

Diver scientists from Commerce's National Oceanic and Atmospheric Administration and Texas A & M University begin this week an undersea project which eventually could affect the commercial fishing industry.

Working from an underwater laboratory with research submersibles and diver propulsion units arranged through NOAA's Manned Undersea Science and Technology program, the scientists will be involved in the Bahama Banks Study. Under study will be:

- Characteristics of fish behavior that can be used to increase fish trap efficiency;
- Differences between day and night distribution of plankton (the base of the food chain) along the coral reefs;
- Fluctuations of the sea level during the last ice age.

The laboratory being used is the Perry Hydro-Lab, a permanent undersea installation sponsored by the Perry Foundation, Inc., and the Bahamas Undersea Research Foundation. It is located in 50 feet of water about a mile off Lucayan Beach, Freeport, Grand Bahama Island. Undersea vehicles to be



UNDERWATER VOYAGER—*This Perry PC-8 submarine is to be used by diver scientists in their current research in the Bahamas. It is a two-man transparent-nosed submersible of Perry Oceanographics, Inc., which gives divers mobility to explore the depths of the ocean investigating the behavior of marine life.*

used are the PC-8, a two-man transparent-nosed submersible of Perry Oceanographics, Inc., and Alvin, the three-man submersible operated by Woods Hole Oceanographic Institution.

Six-day mission

Two fishery biologists from the North Pacific Fisheries Research Center of NOAA's National Marine Fisheries Service will carry out a six-day research mission from Perry Hydro-Lab. William L. High and Ian E. Ellis will continue observations of how fish behave toward traps—a project begun by High as a Tektite II aquanaut in 1970—and will make comparative evaluations of the usefulness of the small habitat and the larger Tektite platform for this kind of research.

Their fish behavior studies are designed to determine if more fish are captured when a trap is placed in a coral channel rather than on top of the coral reef, and to find out how fish behave with respect to different kinds of traps and nets. They also hope to evaluate the effectiveness of divers at installing and modifying complex field sampling structures, and to assess special devices constructed to facilitate diver installation of these structures.

SEA BOTTOM LAB—*Scientist in foreground photographs living coral as divers in background approach the Perry Hydro-Lab, a permanent underwater installation in 50 feet of water off Freeport, Grand Bahama Island, from which NOAA and Texas A&M University scientists will operate in their fish behavioral studies.*

Emplacing fish traps

High and Ellis will conduct site surveys and emplace fish traps. Their experiments will not upset the natural ecosystem, and all fish will be released unharmed from the traps.

Dr. Robert F. Dill of the Manned Undersea Science and Technology program, a marine geologist who has conducted extensive studies of sea level fluctuations including work with Jacques Cousteau, will carry out additional work in the Bahamas Banks Study, in conjunction with Dr. Robert Dietz of NOAA's Atlantic Oceanographic and Meteorological Laboratories. They plan several dives in PC-8 and Alvin.

Dr. Dill has learned from his previous dives in waters around South America, Australia, and Baja California, that there is consistent evidence of oceanic flooding in a series of steps, since the end of the ice age. At depths of about 40 feet, 60 feet, 90 feet, 125 feet, 150 feet, and 180 feet there exist deeply submerged terraces which appear to be old beaches (stillstands), formed when the waters stayed relatively level for long periods of time, then drowned when the waters once again advanced.

Use of the submersibles will permit Dr. Dill to look for deeper stillstands than those observable by diving.

These terraces cannot be found by conventional indirect sounding methods from the surface, and their existence was not known until deep diving submersibles became available for research.

Dr. William W. Schroeder of Texas A&M University, who is supported by the Sea Grant program, will use diver propulsion units for his plankton studies. With the conventional plankton sampling method—towing nets from surface vessels—the scientist does not know exactly where, or at what depths, the specimens were collected. Dr. Schroeder plans to develop techniques for on-site underwater collection, and will dive to take samples at precisely determined locations and depths.

On-site diver collection will have the additional advantage that should the scientists see something unusual during a dive, they can immediately modify their plans and investigate.

Dr. Schroeder's study is preliminary, and will help him complete the design of a major scientific experiment that he hopes to undertake during a return to Hydro-Lab. —*NOAA*

Stereoscopic Aerial Color Photos Published In Book

A volume of three-dimensional color photographs complete with attached cardboard stereoscope by which to view them has been published by Commerce's National Oceanic and Atmospheric Administration.

The photos, known as stereograms, have been prepared from aerial photographs of coastal areas of the U.S., including New York, Washington, Miami Beach, San Juan, and Honolulu.

Shoreline locations, underwater features such as channels, sandbars, and submerged rocks, natural vegetation and agricultural patterns, air and water pollution effluents, geographical and geological features, housing developments, bridges and other engineering features and the damaging and corrosive effects of storms and other natural disasters, such as earthquakes and hurricanes, can be viewed three-dimensionally.

Entitled "Color Aerial Stereograms of Selected Coastal Areas of the U.S.," the book was prepared by Harland R. Cravat and Raymond Glaser of NOAA's National Ocean Survey. Copies are available for $4.75 from the Superintendent of Documents, U.S. G.P.O., Washington, D.C. 20402.

The book is expected to fill a need for a source book for courses in mapmaking, photogrammetry and photointerpretation at universities, colleges and for high schools and libraries. —*NOAA*

Cloud-Seeding Tests Begin Over Lake Erie To Redistribute Snow

Cloud-seeding tests are under way over the Buffalo, N.Y., metropolitan area to determine whether the disproprortionate amount of snow from Lake Erie snowstorms received by this locality in the late fall and early winter can be distributed over a wider area. If current experiments are successful, areas further out from Buffalo likely would get a few more inches of snow than they do now but not so much more that it would be a major problem.

This is the central aim of Commerce's National Oceanic and Atmospheric Administration, which is conducting this pilot operation in weather management in cooperation with the Cornell Aeronautical Laboratory and the State University of New York at Albany.

CHARTING AN EXPERIMENT — *Dr. Helmut K. Weickmann (left), director of NOAA's Atmospheric Physics and Chemistry Laboratory at Boulder, Colo., considers a problem with an associate aboard the flying laboratory during one of the snow seeding experiments.*

If the snowfall can be effectively distributed, similar projects may be initiated in other parts of the U.S. likewise blitzed by heavy dumps of chunky snow, and the idea may catch on in some other countries. Like conditions are found in the Lake Michigan and Lake Ontario regions, and over the Gulf Stream, the Adriatic Sea, the Sea of Japan, and some other parts of the world.

Three feet a day

What happens now, so far as Buffalo is concerned, is that the lake storms pile sometimes as much as 100 inches of dense snow annually on a limited area extending not more than 10 or 15 miles from the shoreline. Three feet of snow may accumulate in a day. The excessive snowfall extends around the eastern and southern margins of Lake Erie, pounding the shore cities in that region.

The result at times is blocked traffic arteries as a snowbound paralysis brings business to a standstill, closes schools, and cramps community social life.

The lake snowstorms are the result of a meteorological phenomenon. In early winter, sharp temperature differences exist between the unfrozen water surface of the lakes and the cold air that has moved down from the north. The snowstorms develop as the air flows over the lake, picking up moisture as it goes. The snowfall from a typical winter lake storm contains an average of 250 billion gallons of water, enough to supply the needs of the entire Great Lakes Basin region of 290,000 square miles for 16 days. To a considerable degree, the storm merely replaces water that it has collected from the lake.

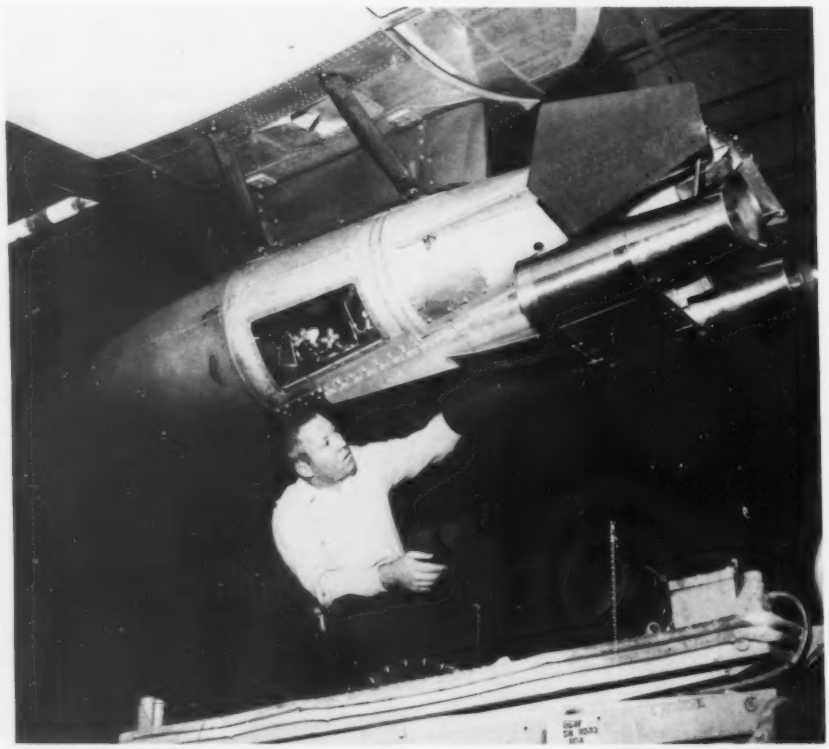
As the storm clouds pass over the lake, they are often too warm for snow. This is because the storm has a relatively low concentration of freezing nuclei upon which the water in the cloud can form.

The result is that, as snow crystals develop, they are frequently large and wet. Instead of the elaborate pattern of the usual snowflake, the snow may take the form of snow pellets or graupel, sometimes called soft hail.

When the storm strikes land, it rises or is pushed up into a colder region of air and precipitation occurs rapidly, dumping the dense snow as it moves along. This effect, meteorologists explain, is due to the nature of water vapor condensation or precipitation inside a cloud. For this to happen, condensation or freezing nuclei must be present. Condensation nuclei usually are plentiful, supplied by dust, air pollution, other particles. But freezing nuclei are much more rare. For instance, at minus 10 degrees Centigrade (14 above Fahrenheit) only one droplet out of 10 million in a cloud will freeze and form a snow crystal. But for every four-degree temperature drop below 10 degrees Centigrade the freezing nucleus concentration increases by a factor of 10. At minus 14 to 15 Centigrade (7 to 5 above Fahrenheit) enough freezing nuclei are produced to cause snow.

The aim of the cloud-seeding tests in the Buffalo area is to inject a large supply of artificial freezing nuclei into the storm cloud, thereby increasing the number of snow crystals and producing lighter crystals that fall more slowly. The object is to disperse the snowfall over a larger area on the winds accompanying the storm instead of having it drop as pellets on a few miles of shoreline. The relatively warm storms, which normally would not precipitate until they reached land, are being seeded over the lake to induce snowfall before the shoreline is reached. Dr. Helmut K. Weickmann, project director, explains that the storms are being seeded over Lake Erie 30 minutes to an hour before they reach the population center.

The seeding experiments, which are being conducted by NOAA's Atmospheric Physics and Chemistry Laboratory (APCL), of Boulder, Colorado, will continue through December 15. The scientists will attempt to seed four or five storms, if that many occur during the period of study, using silver iodide flares or dry ice. Although dry ice is more effective, the quantity that has to be used is so great that silver iodide is preferred. The tests are being made from a DC-6 flying laboratory belonging to NOAA's Research Flight Facility (RFF), based in Miami. Where silver iodide is used, the plane is loaded with about 200 flares, which are ignited and fired from wingtip pods, burning themselves out as they fall through the cloud.



DESIGNER'S CHECK—*Bradley Patten, the flight engineer who designed the mini-seeding jet used to distribute the silver iodide particles prepares for another test.*

Short periods

Since the seeding is experimental rather than an operational attempt at weather management, it is being confined to short periods and carried out under carefully selected meteorological conditions. The tests are the culmination of four years of previous research, and the purpose is to determine whether large-scale operational attempts at lake snowstorm control are feasible. Dr. Weickmann says:

"We have proven our basic seeding hypothesis that lake storms can be artificially modified to produce lighter and more numerous snow crystals that drift farther inland. But we have not yet proven that the effects can be quantitatively significant."

The plane that does the seeding is being used to analyze the results. It is equipped with an intricate array of instruments to track the seeding agent through the cloud, determine cloud temperatures, and provide other information. The Cornell Aeronautical Laboratory is providing a mass of supplementary data. An extensive network of snow gauges, spaced over a large area downwind from Buffalo, records the snowfall rate with and without seeding.

With this array of instruments

and equipment, the scientists in charge of the tests hope to gather sufficient data to ascertain the effectiveness of a seeding operation.

Despite the immense quantity of water in the lake storms, the hydrology and meteorology of the lakes is such that much of the water entering the lakes originates in these water bodies. Thus the tests will not redistribute snowfall in a way that will affect any of the Great Lakes watersheds. However, the principles developed for snowfall redistribution, applied in a full-scale, operational seeding effort, could have an impact on water resource management.

Any operation such as that involved in the seeding of snow clouds inevitably arouses local concerns. Ski area operators want to know if their share of snow will be reduced. Water survey agencies inquire whether too much of the water that normally would go into the lake may fall in a different watershed. Flood control agencies are concerned that redistributed precipitation may contribute to overflows.

Because of such questions, detailed briefings were conducted November 4 and 5 for officials of Buffalo, Niagara Falls, and other affected areas, and other governmental and private groups. Canadian authorities were notified.

Scientists conducting the tests say that sufficient data will be gathered to realistically assess the impact on the different local interests of a full-scale seeding operation. With this knowledge, the local people in the different regions can determine the nature and extent of any future effort to modify the lake storms for their benefit.

Meanwhile, the information gathered in these and other experiments on storms will add to the data bank that eventually may lead to effective control of the weather.

—NOAA

SEEDING THE STORM—*This seeding jet fires silver iodide particles into storm clouds in an attempt to redistribute snow. It is slung beneath the wing of a DC-6 flying meteorological laboratory equipped with instrumentation to analyze results.*

Mariculture Feasibility Study Set For Hawaii Institute

A $38,400 Sea Grant has been awarded the Oceanic Institute of Hawaii by Commerce's National Oceanic and Atmospheric Administration to conduct a feasibility analysis of the potential for open sea mariculture.

Research and development of marine food and industrial organisms, called mariculture or aquaculture, generally has been limited to the coastal zone, and particularly to estuaries, embayments, ponds, or tanks. The Oceanic Institute will consider the potentials for similar culture in the open sea, with particular reference to the use of offshore fixed and mobile platforms, barges, and special structures, for the mass culture of high value fish and shellfish.

While there has been considerable speculation about open sea fish farming, there have been few studies of the economic and engineering feasibility of such schemes. Preliminary studies by the Oceanic Institute indicate a high potential for the use of such fixed structures as offshore oil and gas production platforms.

The project will sum up the state of knowledge in the field and will suggest research and development directions.

—NOAA

Patents Of Special Interest

Recent patents issued by the U.S. Patent Office included:

Portable sleeper unit. A portable sleeper unit adapted for use by campers and others comprised of a collapsible body permitting the unit to be expanded to form a bed-like support and to be collapsed to form a suitcase-like container. The unit can be coupled with brackets for mounting on the side of a vehicle or other support or can be used with support legs for positioning the unit above ground. Patent No. 3,614,794 issued to Alfred H. Rodgers, 1051 E. Homestead Road, Sunnyvale, Calif.

Fruit catcher. A self-propelled fruit harvester unit having a frame and a fruit-catching apron mounted for extension toward a tree to be harvested and retracted into a transport position. A conveyor on the frame collects fruit from the apron and conveys it to a foldable conveyor assembly which conveys it upwardly toward a collection point on the unit. The foldable conveyor assembly is mounted on the frame so as to pivot or fold as the frame is extended and retracted. Extension catcher assemblies and a gap closer apron are pivotally mounted on the frame and provide sloping surfaces for gravity feeding of fruit to the conveyor. Hydraulic means are operable to automatically stop the extension of the frame and to position the extension catcher assemblies and gap closer apron in response to engagement of the frame with a tree to be harvested. Patent No. 3,613,342 issued to Stuart D. Pool, Wheaton, Ill., and others and assigned to International Harvester Co., Chicago.

Patents numbering 2,692,987 to 2,695,997 expire during November. Upon the expiration of the 17-year period covered by a patent, the invention passes into the public domain and may be made, used, or sold by the public without payment of any royalty, or infringement of the inventor's exclusive patent rights.

Auxiliary propulsion for air cushion vehicles. An air cushion vehicle including a ground-effect propulsion system consisting of a main propulsion system and an auxiliary propulsion system usable during certain operating conditions of the vehicle over portions of the vehicle track. The auxiliary propulsion system is constituted of one or more retractable wheels actuated by a hydraulic system and is intended for use below a predetermined vehicular transition speed. Patent No. 3,616,760 issued to Rene Lucien and others of Neuilly-sur-Seine and assigned to Societe Messier and Societe de l'Aerotrain, Paris, France.

Smoke control system. A smoke control system utilizing an afterburner and a filter formed from expanded blast furnace slag, the filter being in the form of a cartridge carried with other filter cartridges in a rotatable drum assembly. A clean filter can be rotated into position to permit products of combustion to pass through while dirty filters are rotated to a position where they can be cleaned automatically for reuse. Patent No. 3,615,248 issued to George J. Holler, Jr., 210 S. Marietta St., St. Clairsville, Ohio.

Puncture-proof tire. Puncture proof or undeflatable tire which may be of the tubed or tubeless variety but in either event provided with a number of substantially airtight cells adjacent a manifold which is adapted to have a normal inlet from the exterior of the tire through a tire valve which may pass through the wheel rim. The manifold is connected to each of the cells through a valve which permits air to pass through the manifold to a cell when the pressure of a particular cell has critically dropped due to a puncture or a rupture of a wall. Patent No. 3,616,831 issued to Jose Amestoy Lafuente and Juan Antonio Leon Melero, Avenida Reina Victoria, 40 Madrid, Spain.

Abstracts and drawings of patents are published as they are issued in the *Patent Official Gazette* each Tuesday. More than 1,600 patents are issued each week. Trademarks are published in the *Trademark Official Gazette*. Copies of the *Patent Official Gazette* and the *Trademark Official Gazette* may be obtained from the Superintendent of Documents, GPO, Washington, D.C. 20402.

Science Calendar

Jan. 9-14—Boulder, Colo.—University of Colorado. Workshop on "The Management of Technology: Effective Management of Engineers and Scientists." Sponsored by the university's Center for Management and Technical Programs.

March 1-3, 1972—Washington, D.C. —Shoreham Hotel. 13th Scintillation and Semiconductor Counter Symposium. Sponsored by Nuclear Science Group of the Institute of Electrical and Electronics Engineers, Atomic Energy Commission, and the National Bureau of Standards.

March 1, 1972—Gaithersburg, Md. —National Bureau of Standards. IEEE Computer Society.

March 22-24—Gaithersburg, Md. —National Bureau of Standards. Conference on Accuracy in Spectrophotometric, Fluorometric, and Phosphorometric Measurement.

April 24-27—Washington, D.C.— American Physical Society, Sheraton-Park Hotel.

November 29, 1971

International Commerce

- Quarterly report, world exports of manufactures
- Report by trade mission to Yugoslavia, Romania
- Three new Presidential 'E' awards
- German economy in slowdown
- Mexico set for upswing
- Korea in growth surge

Traders Discuss New U.S. Economic Policy

Newsmemo

Streamlining of export insurance procedures for U.S. companies is the aim of a new agreement between Eximbank and the Foreign Credit Insurance Association. FCIA now has broader authority to go ahead and commit insurance without prior Eximbank approval. This change, plus a new and simplified reinsurance arrangement provided by Eximbank, will step up the pace on issuing of credit insurance policies needed by manufacturers and suppliers selling U.S. goods overseas.

This speedier process is designed to keep up with the greatly increased coverage being offered by FCIA and Eximbank to their Master Policy clients. The Master Policy provides under a single insurance contract for all of an exporter's short term and medium term sales. Coverage is largely automatic, needs no FCIA or Eximbank review of individual insured credit lines. Master Policy coverage can be either for political and commercial risks, or for commercial risks only. A deductible provision applying to commercial losses makes the Master Policy even more attractive.

The Eximbank story of improved support to the U.S. export community is being told in 46 cities by the bank's officials. They expect to meet with several thousand businessmen in the next several months, with attendance especially sought among executives of small and medium-sized firms. The Eximbank program includes direct loans, guarantees, participation financing with local and foreign banks, and specialized projects tailored for such industries as engineering, leasing, power, and machine tools. It recognizes the U.S. need to meet intense credit competition in today's world markets.

Sounding the call for more interest by U.S. industry in worldwide product standards, Commerce official Richard O. Simpson puts it all quite starkly: "In the past the U.S. standards were largely acceptable to and used by our trading partners because of our clearly superior technology. But times are changing and we can no longer assume that U.S. standards will be the preferred ones." Simpson notes that the French and Germans are doubling their standards budgets, while the U.S. effort limps along with reduced funds.

In a related field, an enterprise that intends to increase European effectiveness in technology is nearing operation in Milan. It is the International Institute for the Management of Technology. Six European governments and a number of European industries are supporting its study courses and research projects. The aim is to lift the level of European management performance--admittedly weak up to now--in the practical use of technological advances.

International Trade Winds

COMMUNICATIONS — RCA Global Communications, Inc., reports that expanded and improved telegraph service between the People's Republic of China and the United States went into effect Nov. 4 at the request of the Shanghai Telecommunications Administration. In a telegram sent by the Shanghai Administration to RCA Globcom in New York, the People's Republic of China made it clear that the expanded facilities were directly related to the recognition of that country at the United Nations. The Shanghai Administration specifically requested that telegraph communications capacity be increased from one to two channels, that more sophisticated electronic equipment be utilized on the channels to improve transmission quality, and that circuit operations be expanded from a limited schedule to around-the-clock service. Direct telegraph operations between Shanghai and the United States were restored on Sept. 15 after three years of disruption.

COMMUNICATIONS—The Hallicrafters Co., Rolling Meadows, Ill., has formed Hallicrafters do Brazil Ltd., following closely its formation of Thai Communications Co. Ltd. in Bangkok. The South American company, which has headquarters in Rio de Janeiro, is a joint venture between Hallicrafters and Monteiro, Aranha S.A., a large holding company with diverse interests throughout Brazil. The new company will manufacture the complete line of Hallicrafters commercial communications products for distribution in Brazil.

MARINE MACHINERY—Babcock & Wilcox, New York, reports that it is moving into the international marine propulsion machinery market. B & W and Breda Termomeccanica E Locomotive, S.p.A., Milan, have signed a license agreement giving Breda the right to manufacture and market B & W-designed marine boilers in Italy. Babcock & Wilcox is one of the world's largest manufacturers of marine boilers with over 11,000 boilers installed aboard more than 4,700 vessels of all types. Breda, which is also licensed by B & W to manufacture and market utility boilers in Italy, is a major manufacturer of mechanical machinery.

NEEC Advice Helping Shape New U.S. Plans

The effect of the Administration's New Economic Policy on U.S. international trade was explored by the National Export Expansion Council Nov. 9 at a plenary meeting in Washington.

Commerce Secretary Stans told the NEEC members that their advice was particularly important to the Federal Government in today's fast-moving international business situation. He affirmed that a number of NEEC reports had already helped provide the platform for the Administration's new policy.

The Secretary said: "If you go back as I did to some of the recommendations made by NEEC in past years, you'll find that a great many of them are getting a great deal of attention by the Government of the United States and by the governments of the other countries."

Thomas H. Miner, reporting for the NEEC committee on the developing countries, linked the operation of the U.S. aid program with its contribution to the U.S. export promotion program. A resolution proposed by Miner that strongly supported the continuation of U.S. economic assistance to the developing nations was unanimously passed by the council.

Reporting as chairman of the NEEC export financing committee, Donald W. Douglas commended recent improvements in Eximbank financing for U.S. exports and asked further liberalization in the medium and long-term loan area, to cover U.S. shipments of capital goods items.

Then he said: "As important as favorable financing terms are in making export sales, there is no substitute for technological superiority and competitive prices on the world market. It is here where the New Economic Policy deserves particular praise from this council. More realistic exchange rates resulting from the floating dollar have made our products more competitive abroad. Investment tax credit stands to be a major factor toward long-run productivity increases, reduced inflation, and an improved production base."

Douglas added a cautionary note: "I hope sufficient agreement can be reached between our Government and those of our trading partners that the 10 percent import surcharge can be removed in the very near future, because I believe that the largest single threat now facing U.S. export industries and indeed the health of the world economy is the danger of reviving protectionist sentiment both here and abroad. We must continue to push for multilateral reductions of barriers to trade."

This same note was sounded by Jose De Cubas, chairman of the electrical generating equipment committee, and Robert Murphy, chairman of the commercial aircraft committee.

De Cubas also said:

"Everything isn't price and everything isn't exchange rates. We have to give good service. I was disappointed at a meeting with a lot of people from Asian countries at which a couple of statements were made that Japan has become a more reliable supplier than the United States. If this is true, this is a very dangerous situation and I think that we should all—our companies, ourselves and our Government—take it very seriously. If we lose the reputation we have of giving good service, we will have a great deal of problems in the future."

Melvin Holm, heading the NEEC taxation committee, traced the progress of the proposal now before Congress for tax deferral for Domestic International Sales Corporations (DISCs). Frank Cruger, small business committee chairman, reported the enthusiasm of small businessmen for the New Economic Policy. Marvin Marcus, leader of the NEEC engineering and construction committee, urged changes in antitrust rules to assist formation of U.S. consortia for overseas projects. He also pointed to the need for improved commercial reporting from U.S. posts around the world.

Guest speakers at the meeting were Peter G. Peterson, Executive Director, President's Council on International Economic Policy, and Henry Kearns, President of the Export-Import Bank.

Substantial changes in Eximbank's medium-term discount loan facility for commercial banks were announced by Kearns, who also told of plans for additional obligational authority from Congress that would permit the Eximbank to move into a short-term discount program for the first time in its history.

The National Export Expansion Council was formed at the request of President Eisenhower in March 1960. It is composed of 90 businessmen, including the chairmen of 42 Regional Export Expansion Councils with a total membership of 1,600 business and professional leaders throughout the nation.

PHOTOS ON PAGE 33—Two November meetings of U.S. world traders focused on the Administration's New Economic Policy. The National Export Expansion Council (NEEC), shown being addressed by industrialist Robert Murphy, held a plenary session Nov. 9 in Washington (see story above). The National Foreign Trade Council, whose delegates are shown gathering trade documents, met Nov. 15-17 in New York (see story on next page).

Trade Group Asks Early Progress On Currencies

The 1971 National Foreign Trade Council convention, first major public meeting of the U.S. foreign trading community since the announcement of the Administration's New Economic Policy, responded to it with a marked sense of stimulus and urgency. It produced:

► A call for prompt action on international monetary realignment, as a followup to the Aug. 15 currency-surcharge measures;

► A spirited defense of the multinational corporation against charges that it is exporting American jobs, and

► A search for ways to emphasize the need of improved U.S. industrial productivity, to survive in today's world competition.

The council, whose membership includes most of the major U.S. companies operating overseas, adopted a declaration keyed to this conclusion: "The New Economic Policy announced Aug. 15 by President Nixon may, we believe, prove to be a major initial step toward solution of pressing economic problems in this country. It can serve as a catalyst for international action to resolve problems between the United States and other nations in the fields of monetary policy and trade."

At the top of the list of international problems, in the view of the council, are: restoring a sustainable balance in the U.S. international payments ledger; stabilizing world monetary and financial arrangements; meeting new and intense forms of foreign economic nationalism, including expropriation and sometimes confiscation of U.S. property; building "cohesion and momentum" in efforts to reduce barriers to trade, investment and transfer of technology; and combatting the "mounting and unsupported claims by some labor groups and others that foreign direct investment is harmful to our domestic economy."

Firestone's views

The council chose Raymond C. Firestone of the Firestone Tire and Rubber Co. to be the keynoter of the Nov. 15-17 meeting in New York. He made these points:

"While advocating free trade, I found myself applauding the President's action of imposing a 10 percent surcharge on imports for two reasons:

"First, it is to be a temporary move. Second, it became time for us to let the other trading nations know we had reached the point where we had to take action to underscore our realization that we could no longer economically live with existing inequities.

"It's my opinion that we've been too easy with too many for too long. If our easing of restrictions had been matched by others then we would be far better off and I would have opposed even this temporary surcharge.

"I believe that over the long haul this action will be viewed with favor even by those it has affected. It will show them that this country, like the others, needs proper two-way trade.

"I hope, though, that the results of this action will not cause a groundswell of feeling that we should resort to a position of advocating continuing tariffs or import quotas or other artificial barriers to block imports.

"To impose barriers would result in an increase in domestic complacency, and we have already seen what complacency can do. Barriers do not make for better products, nor do they keep prices down.

"This brings us to what, in my opinion, is the root of the problem we have been facing with the flood of imports—the need for greater productivity. Productivity is the key to any nation's growth and continuing vitality, and it's a factor which in the United States has not been keeping pace with the rest of the world."

Chairman Wilbur D. Mills of the House Ways and Means Committee told the convention that the "shock treatment" of Aug. 15 had been a success in convincing the other trading nations that they could no longer ignore the economic problems of the United States. He then commented, however, that "there is every evidence that, as the timetable for lifting the additional duty on U.S. imports remains indefinite, the negotiating leverage for achieving a meaningful realignment of currencies will be dissipated."

Rep. Mills said he shared concerns that U.S. trade difficulties may have to be met by limitations of imports. "I still feel, however," he continued, "if we amend our present laws wisely and prudently, we can retain the benefits of expanded world trade and safeguard our own producing interests, both business and labor."

Then he declared that while a restructuring of the international monetary system cannot be expected in a short period of time, "nevertheless an interim agreement on currency values could do much to quiet the concerns of many that the longer the present situation in the international monetary market persists, the more governments will resort to artificial currency manipulations and trade controls."

Monetary solutions vital

The council, in its convention declaration, also underlined the urgency of avoiding delays in currency realignment that could be

caused "either by the failure of other countries to allow 'free market' forces to operate, or by the U.S. setting unrealistic terms or preconditions either for the realignment of exchange rates or the removal of the 10 percent surcharge." The NFTC suggested that "a modest increase in the price of gold" might be needed in this effort, and further recommended that the United States not insist on solving all its international economic problems before it accepts a currency solution.

A similar point was made to the convention by Britain's Ambassador to the United States, the Earl of Cromer, who said that the first reaction to the Aug. 15 measures in Britain and Europe was one of understanding, now followed, however, by growing anxiety. "If the lifting of the import surcharge is long delayed, then I fear that the danger of retaliation by other countries, and a downward spiral of measures and countermeasures will surely grow, putting at the risk all the hard-won gains of the last 25 years," he declared.

Constant M. Van Vlierden, a Bank of America officer who is also an NFTC board member, related the results of an informal survey he had made among his bank's clients in the wake of the Aug. 15 actions. These businessmen had stood up universally well to the challenge, and there had been no panic, he reported. Traders were using innovative patterns in adapting to the new situation, and the inherent strength of the international market system was being demonstrated. Van Vlierden cautioned, however, that these conclusions applied to the short term only; if the current situation continues for a long period the answers would probably be far different, he said.

LATIN AMERICAN PROSPECTS—*Question on Hemisphere business is put to Morris Allen of Commerce Department's American Republics Division.*

Lee L. Morgan, who has headed a task force on multinational enterprise for the U.S. Chamber of Commerce, examined the impact on U.S. exports and U.S. employment of American-owned subsidiaries engaged in production activities overseas. He used his own company, Caterpillar Tractor, which had $767 million in export sales in 1970, as an example.

"In every case where we have established overseas production, exports from the United States have risen. To some extent, these have been parts and components to be incorporated into machines manufactured abroad. But the major portion has been made up of whole machines not produced by the related subsidiary. In other words, manufacture of a portion of the product line in a foreign marketing area has strengthened the market demand for other Caterpillar products manufactured in the United States," he explained.

Morgan pointed out that in 20 years since British Caterpillar was set up, U.S. Caterpillar exports to Britain went up 15-fold. In Brazil, after 16 years, the increase was five-fold; in Australia, six-fold, and in France, after a subsidiary was formed in 1960, exports from the U.S. quadrupled.

Morgan went into detail about the export effect of the establishment of Caterpillar Mitsubishi in Japan in 1963:

"Caterpillar Mitsubishi produces tractors at the smaller end of our product line, together with related equipment. These machines are every bit the equal of their U.S. counterparts. Japanese contractors who buy and like them have increasingly become customers for products at the larger end of the line—manufactured at our U.S. bases—despite freight and artificial trade barriers which add substantially to factory prices. As a result, our U.S. exports to Japan have climbed steadily and rapidly, from under $2 million in 1963 to over $48 million in 1970—a 24-fold increase."

The Caterpillar executive offered three approaches to counter the public criticism of overseas U.S. production operations: 1) work with labor and government to reduce unemployment, particularly that caused by technological change; 2) give the public full facts about operations of overseas subsidiaries, and 3) help development of international regulations on multinational business operations.

AFRICA IS THE SUBJECT—*Delegate brings business query to Commerce Department African economic affairs analyst Stephen M. Conger.*

DISCUSSING EUROPEAN BUSINESS—*NFTC member (left) meets with Commerce Department European specialist Frederick Strauss.*

U.S. Share Dips To New Low In Manufactures Market

The U.S. share of the world market for manufactures, excluding shipments to this country, fell to a new low during the second quarter of 1971.

Exports from the 14 major suppliers exceeded first quarter levels by only a narrow margin, but U.S. sales declined by 1.7 percent to $7.7 billion on a seasonally adjusted basis. As a consequence, the U.S. share dropped from the January-March level by nearly a full percentage point to 20.3 percent.

Thus, the declining trend in the U.S. position, broken in the past year and a half only by a modest upturn during the preceding three-month period, appeared to have been resumed.

Machinery sales falter

In the second quarter, U.S. exports of automotive products and aircraft grew only moderately. Chemical deliveries also rose but less rapidly than from other suppliers. At the same time, shipments of both electric and nonelectric machinery declined, as did those of miscellaneous other manufactures, a diverse group encompassing mainly semifinished goods and consumer nondurables. As a result, the U.S. share deteriorated on a broad front, dipping to new lows in both types of machinery and in miscellaneous manufactures.

Nonelectric machinery sustained the heaviest loss in share from the preceding quarter of all the five product categories, dropping by more than two points to 25.3 percent. U.S. exports fell by 7 percent in value to $2.1 billion, barely exceeding their level of a year earlier. Sales of most types of this machinery were lower than in the previous quarter, reflecting the slowdown in investment spending in many of the United States' major markets. Shipments of metalworking machinery were especially sluggish, while nonagricultural tractors and materials handling equipment also declined. Contrary to the overall trend, a sharp increase in deliveries to Canada helped boost sales of agricultural machinery, tractors, and parts.

U.S. exports of electric machinery also fell, causing this country's share of that market to slide to 20.8 percent. Sales of telecommunications equipment equaled those of the first quarter of the year, but shipments of other types of electrical equipment declined sharply. Measuring and controlling instruments were particularly hard hit, and exports of tubes, transistors, and semiconductors slowed as well.

The miscellaneous other manufactures group also dropped in export value as well as in share. As in both types of machinery, declines in sales were widespread among the many products making up the group. The largest occurred in exports of nonferrous metals, iron and steel, and paper and paper manufactures. These more than offset small gains in rubber and wood products. The U.S. position fell by half a percentage point to 12.4 percent.

Although exports of both chemicals and transport equipment increased in value during the second quarter of 1971, their positions in the world market weakened because sales of this country's leading competitors rose more rapidly. Following a particularly strong first quarter performance, sales of transport equipment rose only nominally during April-June of this year. Exports of commercial aircraft grew by $61 million compared to $157 million in the previous quarter. Deliveries of new jumbo jets, particularly to airlines in Germany, Japan, Italy, and India, along with increased sales of used planes, helped swell the quarterly total.

Although deliveries of passenger cars and trucks to Canada improved, those of automotive parts declined following stepped-up shipments in the first quarter of products delayed by the General Motors strike at the end of last year. Sales of automotive products to all other foreign outlets dropped. As shipments expanded strongly from Britain and Japan, the U.S. share of the transport equipment market fell marginally from 31.6 percent in the first quarter to 31.3 percent. The U.S. share, however, remained well above its 1970 level.

The U.S. portion of the chemicals market contracted less than that of any of the other categories of manufactures. In fact, the decline of two-tenths of a point to 20.3 percent represented the most moderate loss sustained in the U.S. share of the chemicals market in the last four quarters. A large part of the gain in sales reflected increased shipments of radioactive and associated materials, particularly to Germany and Canada, which made up for lackluster performances in organics as well as in medicinal and pharmaceutical products. Plastic materials and resins also recorded modest gains.

U.K. position strengthens

Among the five leading U.S. competitors, the United Kingdom most enhanced its position in the manufactures market during the second quarter of 1971. British exports rose in value by a seventh over the first three months, and the U.K. share reached 11 percent. The expansion in share extended to all five types of goods but was notably strong in chemicals and machinery. Sharply rising sales of British power-generating machinery and materials handling equipment highlighted advances in nonelectric machinery; medicinal and

pharmaceutical products did the same for chemicals. Advances in exports of electric machinery were less pronounced, but widespread. Stepped-up deliveries of automobiles and textiles also contributed to the overall improvement in the British position.

Japan's share edges upward

Based on strong performances in transport equipment and miscellaneous manufactures, the Japanese share moved slightly higher to 9.8 percent. Although ship deliveries declined, exports of automobiles remained expansive throughout the second quarter. An increase of more than one-fourth in shipments of textiles boosted the Japanese share of miscellaneous manufactures.

Neither the Italian nor French position changed in the second quarter. Italy's share edged downward in electric machinery and chemicals, but expanded in miscellaneous manufactures because of growing sales of metals and textiles. France maintained its first quarter standing, recording only negligible shifts in commodity shares.

Germany was the only major U.S. competitor to record a decline in its share of the world manufactures market excluding shipments to this country. The average German share slipped to 19.9 percent from 20.2 percent in the first quarter. A large part of the loss occurred in the chemicals sector, where Germany tops the United States as the world's principal supplier. Markedly slow sales of organics overshadowed small gains in pharmaceutical goods and in plastics and resins in the second quarter. With shipments of steel and textiles lower, the German position in miscellaneous manufactures also weakened.

This article was prepared by the International Trade Analysis Division of the Commerce Department's Bureau of International Commerce.

U.S. SHARE OF WORLD EXPORTS OF MANUFACTURES

Adjusted for seasonal variation

Commodity		U.S. exports (million dollars)	U.S. share (%, world exports to foreign markets[1])
Manufactures, total			
1968	1st qtr.	5,535	22.9
	2nd	5,928	24.5
	3rd	6,462	24.3
	4th	6,235	22.8
1969	1st	5,842	21.1
	2nd	6,925	23.1
	3rd	7,142	23.1
	4th	7,224	22.5
1970	1st	7,349	22.2
	2nd	7,577	21.6
	3rd	7,438	21.3
	4th	7,425	20.5
1971	1st[2]	7,825	21.1
	2nd[2]	7,693	20.3
Chemicals			
1968	1st qtr.	751	23.6
	2nd	812	25.1
	3rd	920	25.3
	4th	812	22.7
1969	1st	662	18.8
	2nd	904	23.5
	3rd	902	22.4
	4th	915	22.3
1970	1st	1,007	23.6
	2nd	967	22.0
	3rd	930	21.2
	4th	942	20.9
1971	1st[2]	937	20.5
	2nd[2]	960	20.3
Nonelectric machinery			
1968	1st qtr.	1,487	28.8
	2nd	1,565	30.6
	3rd	1,699	30.3
	4th	1,613	28.1
1969	1st	1,506	27.0
	2nd	1,842	29.4
	3rd	1,905	29.2
	4th	1,963	29.2
1970	1st	2,010	28.8
	2nd	2,024	27.5
	3rd	2,216	29.2
	4th	2,225	27.5
1971	1st[2]	2,221	27.6
	2nd[2]	2,064	25.3
Electric machinery			
1968	1st qtr.	542	24.8
	2nd	571	26.2
	3rd	605	25.4
	4th	586	24.2
1969	1st	592	23.9
	2nd	687	25.2
	3rd	724	25.1
	4th	698	23.6
1970	1st	721	23.4
	2nd	754	22.6
	3rd	768	22.6
	4th	796	22.5
1971	1st[2]	770	22.0
	2nd[2]	738	20.8
Transport equipment			
1968	1st qtr.	1,357	33.6
	2nd	1,441	35.0
	3rd	1,508	34.7
	4th	1,594	33.9
1969	1st	1,616	33.0
	2nd	1,665	33.1
	3rd	1,659	32.3
	4th	1,643	31.3
1970	1st	1,608	30.6
	2nd	1,828	31.4
	3rd	1,565	28.6
	4th	1,545	25.8
1971	1st[2]	2,037	31.6
	2nd[2]	2,095	31.3
Other manufactures			
1968	1st qtr.	1,398	14.6
	2nd	1,539	16.1
	3rd	1,730	16.4
	4th	1,630	14.9
1969	1st	1,466	13.1
	2nd	1,827	15.1
	3rd	1,952	15.8
	4th	2,005	15.4
1970	1st	2,003	14.8
	2nd	2,004	14.1
	3rd	1,959	13.8
	4th	1,917	13.6
1971	1st[2]	1,860	12.9
	2nd[2]	1,836	12.4

Note: The figures for the first two quarters of 1969 were affected by a U.S. longshoremen's strike. The term "manufactures" refers to chemicals, machinery, transport equipment, and other manufactures except mineral fuel products, processed food, fats, oils, firearms of war, and ammunition. U.S. exports include reexports in order to provide data comparable with other countries' exports.

[1] World exports are defined as exports from the 14 major industrial countries. These nations, which account for approximately four-fifths of world exports of manufactures to foreign markets, are: United States, Austria, Belgium-Luxembourg, Canada, Denmark, France, Germany (Fed. Rep.), Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom, and Japan. Exports to foreign markets are total exports excluding exports to the United States. [2] Preliminary.

NICE GOING—*Joseph J. Slota (right), foreign sales representative of GE's Medical Division, accepts congratulations of Commerce Department's George Driscoll on the gold medal which his firm won for its full-body X-ray apparatus exhibited at the International Engineering Fair in Brno. Two other U.S. exhibitors won medals.*

Brno's Engineering Fair Attracts Representation Of 100 U.S. Firms—

More than 100 American firms participated in the International Engineering Fair at Brno, Czechoslovakia this fall, some 90 percent of them through West European subsidiaries. Three won gold medals awarded by the Fair's technical committee: The Cyclotron Corp. for a nuclear medical device; General Electric for a full-body X-ray apparatus, and Big Dutchman for a poultry factory. These awards represent guaranteed sales in Czechoslovakia of the items displayed and imply a strong likelihood of additional sales.

A sampling of U.S. exhibitors indicated that they had been making sales and felt their participation worth the effort, and were looking forward to future sales.

This year's Fair marked the third time that the Department of Commerce has participated at Brno with a Business Development Office (BDO), which tries to develop and facilitate commercial contacts between local enterprises and the U.S. business community.

The 1971 BDO focused on three product areas—textile machinery, food processing and packaging and scientific instruments—of greatest interest to Czechoslovakia. Catalogs of products in these areas were solicited from U.S. firms for display.

Some 265 manufacturing executives, scientific researchers and engineers visited the office. Of these, 166 filled out questionnaires designed to provide information on business leads to U.S. firms.

The majority of questionnaires comprised requests for information from firms regarding specific products or processes. Others requested technical information and price quotations on certain products without specifying firms; these business leads were processed through the appropriate industrial associations. There were also requests for information regarding the purchase or sale of licenses and possible participation in joint production and marketing ventures.

The Brno International Engineering Fair brings together top decision-makers responsible for formulating Czechoslovak economic policy, as well as the technicians and end-users who help determine the specific goods to be purchased. End-users are otherwise relatively inaccessible in a centrally-planned economy.

Czechoslovakia had an estimated gross national product of $30 billion in 1970. Imports in 1970 were valued at $3.7 billion, 22 percent of which came from the industrialized West. The U.S. share of the market was less than one percent.

Prospects for increasing U.S. exports to Czechoslovakia appear good. Through September, this year's purchases of U.S. goods are double last year's figure.

Best prospect categories appear to be: office equipment (mainly computers and copying machines), industrial machinery (especially electronic numerically controlled systems for machine tools), finishing tools in the construction industry and agricultural goods (especially soybeans and their products).

Firms seeking detailed information about Fair participation may write Jaromir Kolacny, Director, Brno-Vystaviste, Brno, Czechoslovakia. The closing date for submitting applications for 1972 participation is March 31.

Shows In Switzerland, USSR Open To American Exhibitors

Interferex, the seventh International trade fair for **hardware tools and household goods,** will be held at Basel, Switzerland from Sept. 3-5, 1972. For information, contact INTERFEREX S.A., CH-8001 Zurich, Talstrasse 66.

A specialized exhibition of computers and data equipment in Moscow is being organized by a New Jersey firm for next spring. For details, write International Media and Exhibits, Inc., 231 Johnson Ave., Newark, N.J. 07108 (201-242-3320).

Trade Centers Plan Shows In Germany, France

Nuclear instrumentation and equipment, Germany: Market research reveals that U.S. equipment enjoys a predominant position in several areas. Market research has spotlighted high-growth sectors, and a Feb. 21-24 show at the U.S. Trade Center in Frankfurt should provide unusual opportunities for U.S. firms wanting to penetrate the German market.

Approximately thirty U.S. companies will display nuclear instrumentation and equipment from the following areas: nuclear research, nuclear engineering, irradiation technology, industrial application of isotope technology, and nuclear medicine.

German imports of nuclear equipment totaled $65 million in 1969, of which an estimated $32 million was purchased from the United States. Imports of U.S. equipment are expected to exceed $100 million a year by 1975.

U.S. equipment accounts for over 50% of nuclear-related electronics equipment purchases by German research centers. In the area of computerized electronics measurement, the U.S. share is over 80%.

For details contact Henry Weseloh at 202-967-2800, or write him at: BIC-942, U.S. Department of Commerce, Washington, D.C. 20230.

Automated machines and controls: France. The Feb. 14-18 Paris Trade Center show announced earlier on this page will now be accompanied by a special colloquium featuring: all phases of numerical control, fluidics and pneumatic automation control systems, and applications for automated machines and processes. For full details, contact John Wolf at BIC-948, U.S. Department of Commerce, Washington, D.C. (202-967-4942).

BUSINESS CONTACTS—*During one of the many individual interviews by members of a recent trade mission to Romania and Yugoslavia Joel D. Honigberg (left) explains the advantages of his company's equipment to a prospective buyer in Zagreb.*

Strong Demand For Air Conditioning Is Seen In Romania And Yugoslavia

A strong demand for air conditioning in Romania and Yugoslavia was affirmed by the members of a U.S. Heating and Cooling Equipment Mission upon completion of their recent trip to those countries. That there is keen competition was also affirmed.

A single industry, tourism, of vital importance to Romania and Yugoslavia because of its hard-currency earnings, will provide a substantial market for air conditioning in, for example, all new hotels, some under construction, and others in the planning stages. "There is a surging demand for air-conditioning equipment of all types and sizes," said mission member C.Lee Babin, vice president and general manager, Dunham-Bush International, West Hartford, Conn.

The air-conditioning equipment manufacturers who comprised the mission reported more than 200 significant contacts with Romanian and Yugoslav businessmen and Government officials, active negotiations with more than 40 agency firms, and an estimated $3 million worth of sales over the next 12 months.

The members observed that establishing satisfactory facilities for adequate maintenance of equipment, the shortage of hard currency, and making satisfactory credit arrangements present problems. They agreed, however, that these factors are not insurmountable as illustrated by the performance of other U.S. firms presently active in both countries. "We are already doing business in Romania and Yugoslavia," said R. C. Ten-

BRIEFING SESSION—*Mission member Donald Larson (right) spoke at a meeting with the Economic Chamber of the Republic of Croatia. Others (from left): Thomas Dunlop, U.S. Commercial Officer, and Orme Wilson, U.S. Consul General, Zagreb; Dusko Djermanovic, Foreign Trade Secretary of the Economic Chamber; and Livingston Goddard, mission director.*

ney, European marketing director of the Thermo King Division of Westinghouse Electric Co., Minneapolis, "but the mission enabled me to make useful contacts with appropriate Government and business executives—which provided better knowledge of business conditions, methods, and needs."

Hotels planned

Mission Director Livingston Goddard of the Commerce Department's Office of Export Control said, "In Dubrovnik on the beautiful Adriatic Coast, we met for a full day with three groups of Yugoslav businessmen who were planning new hotels north and south of Dubrovnik and who invited U.S. participation on a joint venture basis. Construction had already started in one complex. The total planned investments exceeded $100 million. After the meetings, several members discussed with Yugoslav engineers specifications for air-conditioning equipment required for the new hotels."

Donald J. Larsen, president of the PVS Manufacturing Division of Wheeling Service & Supply, Inc., Arlington Heights, Ill., provided samples of polyvinyl chloride coated steel used in air-conditioning underground duct work. Larsen reported great interest in his product but recognized the problem of making satisfactory financial arrangements.

With respect to marketing products in Romania, Silvian Petrescu, deputy general managing director of Publicom, the Romanian international sales promotion and advertising agency, told the mission director that all product samples were appreciated and that brochures alone were not as satisfactory to his country's businessmen. Petrescu urged, for example, participation in Romanian trade shows. After exposure to the market by the trade mission, several of the members stated they would participate in U.S. Department of Commerce air-conditioning equipment shows, the first one scheduled in Zagreb in the spring of 1972.

Joel D. Honigberg, president of J. D. Marshall International, Inc. of Skokie, Ill., said ". . . . a large number of Yugoslav enterprises known as end-users—such as factories, contractors, installers—have well defined requirements. It was my experience that the manager and engineers connected with such enterprises understood the products offered. In one case a purchase was practically assured, while in another actual quantities of each model were indicated and a pro forma quotation will be submitted for study and eventual approval."

Microwave ovens sought

There was an extraordinary interest by Romanian and Yugoslav businessmen in U.S. products not limited to the general field of air-conditioning equipment. For example, Ben Douglas, vice president, international sales, Amana Refrigeration Co., Amana, Iowa, was enthusiastic about the business reaction to one of his company's products, microwave ovens. His problem now is to select the appropriate representatives who have requested the right to represent Amana in the sale of microwave ovens.

The keen interest in air-conditioning equipment in general was evidenced at the meeting in Zagreb with the Economic Chamber of the Republic of Croatia to introduce mission members to a selected group of invited businessmen from Croatia and Slovenia. Fifty-six Yugoslavs listened to each mission member describe his products, and then asked for appointments with the U.S. company representatives. The mission spent the next two days with Croatian and Slovenian businessmen actively interested in one or more equipment lines.

Competition challenging

The mission members were in full agreement that Yugoslavia and Romania will be buying air-conditioning equipment for hotels, restaurants, office buildings, factories, and the transportation industry. It was recognized, however, that the competition from other countries is keen. As Babin of Dunham-Bush said, "For years Britain, France and both East and West Germany have been developing their interests." To meet the competition is the real challenge to the U.S. air-conditioning industry.

South Carolina, Kansas Firms Get Export Honors

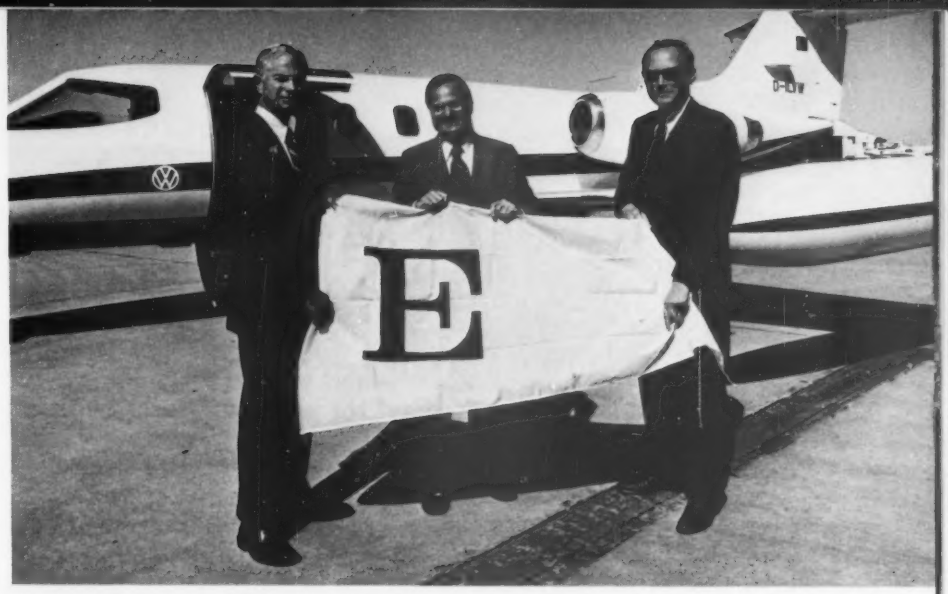
Two South Carolina manufacturers and a Kansas aircraft company are flying new "E" and "E" Star flags for outstanding achievements in development of overseas markets.

Rock Hill Printing and Publishing Co., a Division of M. Lowenstein and Sons, Inc., became South Carolina's first winner of an "E" Star since the awards program was started. The Rock Hill, S.C., plant received the nation's highest export award for its continued increase in overseas sales of American textiles.

Saco-Lowell, Division of Maremont Corp., was the second South Carolina firm to receive an "E" award. From 1968 through 1970 the Easley, S.C., manufacture of textile machinery experienced a dramatic expansion of its export market. The firm modified its equipment to meet the needs of special areas such as Poland, Turkey, Nigeria and the Far East. The quality of its product, plus good financing terms, has offset in part the stiff price competition from Japan.

Gates Learjet Corp., a manufacturer and marketer of business and corporate jet aircraft, more than doubled its export sales in a two year period starting in 1968.

The Wichita, Kan., firm, winner of an "E" award, established a European sales office and distributor dealer organizations in addition to its chain of franchised Learjet service stations. Through its design of new aircraft and avionics equipment for specific markets, liberal credit terms, participation in international trade fairs and extensive promotional activities, the corporation has penetrated a number of new market areas.



EXPORTER OF AIRCRAFT—*With product bound for Germany in background, officials of Gates Learjet are shown accepting "E" flag. (From left) are Charles C. Gates Jr., company chairman and president, George H. Payne, Commerce's Kansas City Field Office director, and Sandor Kvassay, vice president.*

SOUTH CAROLINA'S FIRST—*Rock Hill Printing and Publishing Co. was recipient of an "E" Star award. Shown (from left) are U.S. Rep. Thomas S. Gettys, William H. Grier, firm president, Paul Quattlebaum Jr., Commerce's Charleston Field Office director, and U.S. Sen. Strom Thurmond, speaker at the ceremony.*

SOUTH CAROLINA'S SECOND—*Raising of "E" flag in Easley, S.C., made Saco-Lowell the state's second "E" award winner. (From left) are State Treasurer Grady L. Patterson, Paul Quattlebaum Jr., Commerce's Charleston Field Office director, Russell E. Graham, president of the textile machinery manufacturer, U.S. Sen. Ernest F. Hollings, U.S. Reps. James R. Mann and William Jennings Bryan Dorn.*

German Economy Moving To Lower Level Of Activity

Germany's real growth may drop to less than 1 percent in 1972, reports the U.S. Embassy in Bonn. The economy got off to a good start this year, with gross national product up in the first six months by 4.1 percent, but a poor second half will result in a lower full-year figure, probably no more than 3 percent.

Firms are cutting back

After a brief resurgence in the February-May period, industrial production began to decline again, as it had in the second half of 1970. The industrial production index in August was at a level below that at the end of 1970 on nominal and seasonally adjusted bases. Firms seem to be cutting back on production in order to stretch orders on hand. New orders began to fall off after April and were down still further in August.

Private consumption, fueled by extremely high wage and salary increases in 1970 and early 1971, provided the momentum to keep the German economy moving in overdrive into 1971. This element, along with expansionary spending in the public sector, strong export demand and favorable winter weather, overrode the downswing which many analysts foresaw for this year. This impetus is now waning.

Average wage and salary increases in industry for the first two quarters showed steady deceleration from the peak of 16 percent reached in the fourth quarter of 1970. Effective wage rates are now increasing more slowly than contractual wages, an illustration that the labor market is easing and that employers no longer must pay constantly escalating sums to attract workers.

The seasonally adjusted unemployment rate has, however, held steady for the three months through September at only 1 percent. Job vacancies and total hours worked are declining steadily, if moderately, as the absolute number of unemployed increases gradually. These factors, combined with the current uncertainties on the international scene, have acted to moderate wage demands from trade unions. The average increase in industrial wages under new contracts reportedly fell to 8.5 percent in the third quarter.

Export orders drop

On the basis of incoming new orders, export demand has also dropped considerably since the freeing of the Mark in May. The drop is most obvious in the investment goods category where export orders in August were some five percent below the level of August 1970. The de facto appreciation of the Mark by some seven percent against a weighted average of the currencies of Germany's trading partners is dampening total exports, as is the U.S. import surcharge to a much more limited extent.

Public sector demand was reduced by the German Government in its fiscal policy actions of May 1971. Current account expenditures for the public sector as a whole were, however, up some 18.4 percent in the first half of the year. In July and August Federal expenditures have gone up by only 9.6 percent and 6.7 percent, respectively.

Investment spending has been a larger portion of total demand in 1971 than was forecast earlier, given lower profits and increasing costs, but total expenditures for plant, equipment and inventories in the first half of the year were up 2.5 percent in the first half over the second half of 1970. Present estimates are that investment is much lower in this half and probably will be even lower in 1972.

The German economy continues to be plagued by rapidly rising prices. The rise in industrial producers' prices appears to be slowing, despite a slight acceleration in April and May of this year. The cost of living index continues to rise rapidly, however, reaching a new record for the Federal Republic of 5.9 percent in September over September 1970. Consumer prices can be expected to lag well behind the downturn in overall demand and may not begin to decelerate toward more suitable levels for a number of months.

The Bundesbank acted in mid-October to relax its monetary policy from the relatively restrictive stance taken in the first three quarters of 1971. Reductions in the Lombard rate, rediscount rate, and minimum reserve requirements were principally designed to reduce the inflow of foreign funds, which had pushed the effective appreciation of the Mark to a level of 10 percent against the dollar by Oct. 21. The Bundesbank action will reduce the financial squeeze which firms have been feeling in Germany in the past year.

Spending pace to slow

The Federal Government acted in May to cut back spending levels, which were too high for the state of the economy. It has now submitted a 1972 budget bill to the legislature which calls for Federal spending in 1972 to increase at only 8.4 percent over 1971, with an additional DM 2.5 billion of spending which could be activated against the development of a recession.

Respected German economic

research institutes and other private sources forecast that real growth in GNP will be no more than one percent in 1972. As demand pressures ease, price pressures are expected to abate until the rise in the consumer price index drops to an average rise of 4.5 percent for the year. Investment plans are expected to be down significantly, while private demand and export demand will grow much more slowly than in 1971. Import growth in 1972 is forecast at no more than three percent, as growth in industrial demand for primary and intermediate inputs slows.

The rapid rise of German industrial and consumer prices, combined with the de facto appreciation of the DM, and the de facto devaluation of the dollar against third country competitors should upgrade the competitive position of U.S. suppliers in many product lines. The U.S. share of German imports continued to exceed 11 percent in 1971, rising 16 percent in the first eight months over the same period in 1970, as opposed to a 12 percent growth in imports as a whole.

Expenses may be deferred

The only fly in the ointment may be that slower growth in 1972 could seriously cut back on intermediate goods imports, as well as imports to satisfy consumer demand later in 1972. Traditional German conservatism probably outweighs the optimism of the recent boom at this time, and executives, unless provided with convincing arguments, will be inclined wherever possible to defer expenditures for capital equipment.

Rising labor costs and a chronic shortage of labor do, however, assure continued interest in labor saving or innovative services. German importers are showing a lively interest in the United States as a source of supply and are actively seeking additional product lines.

NEW GERMAN-U.S. PLANT—*This Kaiser-Preussag aluminum facility at Voerde was completed early this year. Investment in Germany has declined in recent months.*

One such line is automotive diagnostic, maintenance and repair equipment.

Market research for forthcoming exhibitions at the U.S. Trade Center in Frankfurt and commercial fairs in Duesseldorf, Hannover and Munich indicates excellent sales potential for nuclear instrumentation and equipment, electronic components, electrical connectors and electro-mechanical components, and a broad range of EDP equipment (over 90 U.S. firms have already made arrangements to exhibit at "Systems '71" in Munich, the largest single presentation of such equipment ever undertaken in Europe).

Multi-billion dollar enterprises, both in the private and public sectors, have expressed interest in developing U.S. sources to meet their recurring requirements for products and equipment. Export orders can be obtained by those suppliers willing to study specifications and to prepare responsive bids.

Robert Bosch GmbH, a Stuttgart-headquartered manufacturer with annual sales of $1.7 billion, for example, is currently looking at the United States as a long-term source for several hundred electrical, electronic and automotive components (see *Commerce Today*, Sept. 6, Page 67).

Products are needed

Exploratory meetings with procurement officials of the German Defense Ministry and the German Federal Railways reveal a similar interest on their part in worldwide competitive procurement. Further discussions will be held to identify specific product needs which can be supplied off-the-shelf or in profitable specification production runs from the United States.

American know-how, particularly in the service industries, is a marketable commodity in Germany. Fifty percent of the newly established American enterprises in Germany were in the service industries in the third quarter of 1971, notably computer software, hotel management, advertising and marketing, education, and investment/brokerage. A number of German marketing experts see their country poised on the threshold of massive expansion into franchising. The best initial prospects appear to lie in service industries, hotels and quick-service restaurants.

Mexico Set For Upswing In Early Months Of 1972

Mexico's economic slowdown has continued into the second half of 1971, and no real signs of recovery are expected by the U.S. Embassy in Mexico City until at least the beginning of next year. Following a real growth rate of 7.7 percent in 1970, and an average growth of 6 to 7 percent over the past decade, reports the Embassy, the gross domestic product increase is generally expected to be as low as 5 percent for 1971.

Slowdown is mild

The slowdown in the Mexican economy is nevertheless mild when viewed in the context of economies of other countries, and there is little doubt that it retains its basic strength and high growth potential. The length of the present lull is likely to depend to a considerable extent on the government's progress in stemming inflation and in reducing the trade deficit.

Mexico's Finance Secretary noted in July that "consolidation" of the Mexican economy could involve up to a two-year period. Any renewed difficulties in the major problem areas could result in the Government maintaining a tight rein on the economy. However, most observers expect an upswing in either the first or second quarter of 1972.

Public construction projects moved abnormally slow during 1971, even taking into consideration the change in Administration. Increasing numbers of contracts have been awarded during the past several months but full-scale implementation has not yet been achieved.

The Government has announced a heavy public investment program for the next several years, much of which should begin to stimulate the economy during 1972. Of particular importance are large expenditures scheduled for electric power generation, development of tourist facilities, agricultural development, urban housing construction, and the large steel producing complex.

In connection with new fiscal and public investment policies announced during 1971, the Echeverría Administration apparently intends to give a slightly different orientation to the Mexican economy. While no sudden shift is expected, public statements by Administration officials indicate that increasing emphasis will be placed on income redistribution, rural development, and promotion of exports. This move is reflected in increased tax burdens for business and luxury consumption, greater social security coverage, the stronger orientation of financial resources toward low-cost housing and agriculture, and a whole series of fiscal incentives for export promotion.

The industrial production index for Mexico hovered around the average 1970 figure during the first half of 1971 and will probably be no more than one to two percent higher for the entire year. Construction materials, including steel, and household durables, especially those subject to the luxury tax, are down considerably. Automobile production is up slightly only as a result of a strong first quarter. The considerable growth in both chemical and artificial fibers largely stems from increased export markets.

New assistance to the U.S. exporter will be provided by the facilities for product exhibition in the U.S. Trade Center which is scheduled to be inaugurated in Mexico City in February 1972. The first in Latin America, the Center will show prospective Mexican and other Latin buyers specialized and sophisticated capital goods that could contribute to more efficient local manufacturing for both the domestic and the export market.

Manufacturing firms could normally be expected to increase their own investment programs following any strong renewal of Government spending. Mexican industrialists, however, face a rather uncertain situation for the near future. Production costs have risen rapidly as a result of increased labor costs and taxes, but Government spokesmen have indicated that continued pressure can be expected in order to prevent price increases. Industry is being urged to become more modern, aggressive, and efficient in order to meet world market competition—and threatened with loss of import protection if it does not. Such reorientation of the economy is expected to be a matter of degree and emphasis rather than a sudden shift, and the manufacturing sector will probably continue to be, as it has been for the past decade, the most dynamic sector of the economy.

Attention to mining

Mining production in Mexico has been largely stagnant for the past several years as a result of price fluctuations in the world market, decreased levels of new investment, and depletion of highest grade ores. The new Administration has, however, given considerable attention to the mining sector, including substantial new investment projects (particularly in iron and steel), additional fiscal incentives, and the Mexicanization of Anaconda's Cananea copper mine, which was the only major mining company not majority Mexican-owned.

Private mining companies have also significantly increased new investment and exploration during the past year and have indicated plans to continue during 1972.

Many of these new projects will begin operation during 1972 and can be expected to increase mineral output, particularly in "industrialized" minerals. Low world market prices continue to be a major problem, especially for sulphur, and may continue to hold down export revenues.

Production by Pemex, the state-owned petroleum industry, continues to increase at a slower rate than does domestic demand. In fact, production of some petrochemicals has actually declined in 1971. Mexico last year became a net importer of petroleum products for the first time in recent years and no immediate reversal of this position appears possible unless large investment funds are made available for off-shore development —and such prospects are not bright at the present time.

Imports down, exports up

Mexico's balance of trade situation through the end of 1971 will probably show a modest improvement over 1970. Through August, imports were down by 1 percent from 1970, when they had risen by 18.8 percent, and exports were up 2.7 percent as compared with a 4.7 percent rise through August of 1970. The trade deficit for the first eight months of 1971 was 5.8 percent less than for the same period last year.

However, at the present rate, this year's deficit will apparently still be the second largest in Mexican history. Furthermore, Mexican exports have traditionally shown a slight decline during the latter months of the year, and it is quite possible that some of the reduction in imports, particularly by the public sector, may only reflect a postponement until a later date.

Significant increases have been achieved during 1971 in the export of manufactured goods, particularly machinery and parts, chemicals, and steels. Preliminary statistics for the first eight months of 1971 indicate that manufactures now represent 42.2 percent of total exports, as compared with 34 percent at the end of 1970.

With the probable increase in both agricultural and mineral production, Mexican exports should show considerable improvement in 1972. Revenues from increased sales could, however, be eroded by price instability for basic commodities.

If the Government's promotional efforts begin to bring fruit, 1972 could be a reasonably strong beginning in long-term export expansion. Increased investment and a buoyant economy, however, will also involve increased capital goods imports. Thus, it would appear that any significant reduction of the trade deficit will be a long-term process.

Despite the continued heavy trade deficit, Bank of Mexico reserves increased to slightly over $1 billion as of August, 1971, from $820 million at the end of 1970. This rise would appear to be largely due to further net gains from tourism and border transactions, net new foreign borrowing, additional foreign direct investment and other inflows of both long and short-term foreign capital. Mexico, for example, apparently has a modest advantage in its bilateral balance of payments with the United States, despite a considerable trade deficit, primarily as a result of such inflows as those just cited.

The United States has traditionally been the predominant supplier of Mexican imports, providing about 64 percent of the total in 1970. Furthermore, Mexico is the fifth largest U.S. export market in the world, and the largest in Latin America, buying in excess of $1.5 billion of U.S. goods in 1970. Although U.S. exports to Mexico through July 1971 decreased slightly from 1970 levels and U.S. merchants along some parts of the Mexican border report a decline in retail sales as a result of a more strict enforcement of Mexican customs, the United States can be expected to maintain its predominant position in the Mexican market. U.S. products should also receive an advantage in price competition from the present readjustment of exchange rates as Mexico maintains its previous relationship to the dollar.

MEXICAN STEEL—*Hot metal is poured at the Fundidora de Fierro Y Acero de Monterrey plant. The country's steel output is down considerably so far in 1971.*

Strong competition

U.S. exports, however, will continue to face strong competition in many areas of the Mexican market from European and Asian suppliers, who will obviously try with more aggressive salesmanship to overcome their less favorable price position. Furthermore, more and more products which the United States has traditionally exported to Mexico are now being produced locally, with such production being protected by import license requirements.

While the U.S. exporter, particularly of capital goods, will continue to find Mexico a large and receptive market, he must consider not only price, quality, and service in the face of competition but also the possibility of local manufacture either under license or through direct investment if he wishes to maintain a share of this market.

Korea In Growth Surge; Imports Expand Rapidly

Korea is experiencing a resurgence in economic growth, reports the U.S. Embassy in Seoul.

Trends in the Korean economy in the first half of 1971 diverged markedly from those of 1970. The relatively low growth rate in 1970, 8.9 percent, was mainly attributable to a policy of monetary restraint, designed to limit investment, price increases and imports. Prices, in fact, rose somewhat more in 1970 than in 1969, but imports rose only 8.8 percent compared with 25 percent in 1969.

Economy picked up

By contrast, in the first half of 1971 there was a resurgence of growth in GNP to 13.9 percent, accompanied by a moderate relaxation of monetary restraints. However, the money supply expanded rapidly at the time of the presidential and National Assembly elections in April and May, rising 7.8 percent in April alone. Domestic credit remained within the limits specified for the first half of the year in Korea's Standby Agreement with the International Monetary Fund.

Rapidly expanding imports, coupled with a disappointing first half export performance, foreshadow a record trade gap in 1971 of $1,250 million, with exports of $1,100 million and imports of $2,350 million. The $1,250 figure, which is a seasonally adjusted, straight line projection of first-half performance would not only exceed the 1970 figure of $922 million but also reverse a brief but encouraging trend in 1970 when the commodity trade deficit fell somewhat.

Events since June have rendered a straight line projection of first half trade trends unreliable at best. Taken together, the won devaluation to 370.8 per dollar, the U.S. import surcharge and the revaluation of the Japanese yen have dramatically altered the context within which Korea trades with the world. While it is too early to measure the net impact of these events, some indication of the direction of their impact on the Korean trade balance is possible.

The won devaluation, of course, should have a positive effect, but the extent of the benefit will be eroded unless the Government allows the exchange rate to float again soon to offset price increases. The U.S. import surcharge, on the other hand, will clearly have a temporarily negative impact, softened somewhat by the relative price inelasticity of Korean exports in the U.S. market. Finally, in spite of Korea's heavy reliance on Japan to supply intermediate inputs, the yen revaluation probably will have a positive effect on Korea's trade balance which will more than offset the negative impact of the U.S. surcharge.

The trend of the trade deficit was a contributing factor to the devaluation of 13 percent at the end of June. The exchange rate had been allowed to float upward somewhat since the last major one-step adjustment in 1965, especially in the first half of 1971, but it had fallen well behind the rate of price increases, even after allowing for price increases in other countries. Nevertheless, the mid-1971 adjustment might not have been made except for the pressure of the trade deficit.

Reserve level fell

The widening trade gap naturally had a strong impact on the overall balance of payments picture in the first half. Net capital inflows from abroad increased by nearly 28 percent over the first half of 1970, to $380 million. The increase appears to have occurred in loans of all maturities, although complete official data are not yet available. Even this large increase in foreign capital was insufficient to cover the commodity trade deficit, with the result that net gold and foreign exchange reserves fell from the end of 1970 by about 6 percent to $551 million.

The disappointing export performance will have only a modest effect on Korea's foreign debt service ratio in the short-run. This ratio, defined as the ratio of principal and interest payments on loans of more than one year maturity to commodity export earnings (excluding invisible receipts), was 32.2 percent at the end of 1970, and was projected by the Korean Government to fall to approximately 29 percent at the end of 1971. However, there probably will be no significant change in this ratio in 1971. In the longer term, of course, the additional foreign

U.S. GOODS AT PUSAN—*A U.S.-made crane at the Port of Pusan unloads an American diesel electric locomotive destined for the Korean National Railroad.*

debt in 1971 will increase the debt service payments in future years.

Both the devaluation and the trade deficit have significant implications for the domestic economy. For July, the first month following the devaluation, the official price indices showed no increase, and in August the wholesale index rose only 0.7 percent. These statistics do not give the whole picture, however. In particular, during August, petroleum prices rose markedly, and there were various other notable price rises. The effects of the petroleum price increases will be felt throughout the economy. The possibility of substituting domestic coal is limited and coal prices are expected to be increased by 15 percent.

Although imported commodities have been the leaders, price increases cannot be attributed entirely to the devaluation or even to higher producer prices, as in the case of petroleum. There have been indications of suppressed inflation in the economy and the administrative controls, direct and indirect, which to some extent have held down prices seem to be inadequate.

Domestic impact

The trade deficit has had a domestic impact through the drawdown of foreign exchange holdings already noted. This has contracted the money supply despite the growth of domestic credit, which in the third quarter was somewhat in excess of the rate required by the IMF Standby Agreement. Korean authorities believe that a reduction in the present rate of increase of domestic credit would be politically unwise, and would provoke an outcry from businessmen, who already are strongly criticizing the monetary restraint. Nevertheless, price pressures and the trade deficit justify monetary restraint.

Taking a closer look at Korea's first-half trade performance, the value of imports rose 34 percent over the corresponding period of 1970. This not only greatly exceeded the low import growth of 8.8 percent in 1970 but was also much higher than the roughly 10 percent growth target for 1971. Both imports used in the production of export commodities and imports for general domestic consumption had high growth rates, a somewhat surprising fact in view of Korea's extensive import licensing system. By comparison, in the first half of 1970 imports for general consumption were only about 10 percent higher than in the first half of 1969.

KOREAN CENTRAL GOVERNMENT BUILDING—*This new structure, located near the U.S. Embassy in Seoul, is serviced by American-made elevators.*

Unlike Korean imports, the level of Korean exports is largely determined by external factors, most important of which is the state of the American economy and competition encountered in the U.S. market. Thus the lackluster performance of the American economy no doubt was a significant contributor to the fact that Korean exports through June 1971 rose by 26.8 percent over the first half of 1970 to $501 million. While this is certainly an impressive gain by international standards, it is well below the 35 percent target expansion for 1971.

The unexpectedly high rate of expansion registered by the Korean economy in the first half of 1971 proved to be a boon for U.S. exporters. Korean imports from the United States were $375 million, an increase of 47 percent over the first half of 1970 and roughly one-third of Korea's total imports. As in the past the composition of U.S. goods imported into Korea was diverse. The most important categories were (millions of dollars cif): wheat (63.9); cotton (35.9); rice (34.7); non-electrical machinery (32.9); electrical machinery (31.6); and iron and steel scrap (25.1).

U.S. position improves

The United States continued to improve its position vis-a-vis Japan as a supplier to the Korean market, in terms of imports financed by Korean foreign exchange (KFX) as well as loan-financed imports.

Even if the Korean Government succeeds as planned in slowing the rate of economic growth to 8.6 percent per year during the Third Five-Year Plan (1972-76), the market for American products in

Korea should continue to be very favorable. This is particularly true in view of the revaluation of the yen, which makes U.S. exports less costly relative to Japanese exports.

Korea continues to place emphasis on the purchase of the machinery and equipment necessary to develop more varied and higher quality products for the world market. The following categories are top sales prospects in Korea: scientific, control, testing and measuring instruments; machine tools and metalworking equipment; office machinery and computing equipment; power hand tools; food processing and packaging equipment; pumps, valves and compressors; medical equipment; air conditioners and refrigeration equipment; and heavy duty materials handling equipment.

Further opportunities

Further sales opportunities will arise in connection with Third Five-Year Plan projects for harbor construction, road building, river basin—dam development and modernization of agriculture. These projects are already generating a demand for construction equipment, agricultural machinery, food distribution equipment and engineering services.

On the investment front, Korea appears to be on the verge of a significant spurt in the level of foreign direct investment in the country. From the enactment in 1962 of the Foreign Capital Inducement Law, a total of $226 million in foreign direct investment has been approved through 1970, of which roughly $141 million, or 62 percent, was from the United States. In 1970 alone, direct investment from the United States totaled over $50 million, while Japanese investment amounted to $22 million. In terms of the attitude of the Korean Government, the investment climate remains excellent, particularly for investors willing to participate in joint ventures.

Congo, Under New Name Of Zaire, Enters Period Of Economic Transition

The Republic of the Zaire—formerly Congo (Kinshasa)—is continuing to move upward, but at a slower pace than in the last two years, when real economic growth averaged 8 percent annually. Important gains are being racked up in physical output, even as the economy is undergoing a period of transition and adjustments engendered by a 21 percent drop in copper prices in the first half of 1971 from 1970 levels.

GECOMINES—the national copper producer—is surpassing targeted output this year. Output surged vigorously forward in the first three months and although the pace is unlikely to continue through the rest of the year, total full-year production could well amount to 420,000 tons. The plan was to reach 460,000 tons by 1974, but there is apparently flexibility in capacity to allow somewhat larger annual increases.

SODIMICO—the Japanese copper firm in Katanga—is running a little ahead of schedule in its plans to mine 40,000 tons in 1973. At current market prices its output will bring in an additional $44 million, 5 percent of total exports.

The U.S. Embassy in Kinshasa goes on to say that production of other minerals is proceeding normally, with output of cassiterite and manganese showing substantial increases and other important metals such as cobalt, gold, diamonds and zinc on about the same scale as last year.

Commercial crops and exports are registering a 7 percent rise this year while subsistence agriculture is more or less marking time.

Pressure from lower copper prices and a high import rate are narrowing Zaire's trade surplus this year and an overall balance of payments deficit is likely.

The Government is continuing to follow the liberalized import policy it instituted in the aftermath of the mid-1967 monetary reform. Part of the financing needs is being covered by increased medium-term borrowing at foreign private banks. The country is well able to afford considerable expansion of foreign debt since its external liabilities are relatively small and repayments constitute no more than 4 percent of export earnings. Foreign exchange reserves accumulated during a period of unusually high copper prices are lending effective support during this transitory period of adjustment and reduced export earnings.

Trade trends

A small increase in exports is expected next year and a more important one in 1973 from important new copper production coming on stream. Meanwhile, a selective reexamination of liberal import policies is also a possibility and could have a beneficial effect in maintaining an adequate level of foreign exchange reserves.

Now in operation for more than a year, SOCOFIDE, the private development bank, is more than living up to expectations. Designed to spur and promote private industrial development through extensions of loans (and some equity participation), it is well on its way in filling this important need. In fact, its short-run objectives have been met and surpassed this year. It had approved 19 loans totalling $12 million by mid-year, compared to a $4 million forecast.

Congo (Kinshasa) has been renamed the Zaire Republic, effective Oct. 28, and the Congo River is now known as the Zaire River. Zaire, the ancient name for the Congo River, is also used to designate the Congolese unit of currency.

Conditions of budgetary stringency have prevailed so far this year as a result of the drop in copper prices. Strict expenditure control through the introduction of computers and a more rigorous review of spending priorities is being applied. These measures are succeeding in moderating the rise in expenditures, thereby reducing the size of the budget deficit. Basic investment priorities are being maintained, however, and there is some increase in funds devoted to the development of infrastructure, particularly in the transport sector.

Economic handicap

Zaire's economy has for many years operated under the severe handicap of a deteriorating road and river network. To restore this system, which is vital to the operation and future development of the country, will cost—it has been officially estimated—$500 million and take ten years. Zaire alone cannot possibly provide these sums of money and international assistance will be needed.

Having established political and economic stability, Zaire is now entering a new era of effort for the achievement of economic development. The decade of the 1970s will be marked by strong attempts to develop the interior of this large and potentially very rich country and by vigorous effort to find economic solutions to the nation's social and economic problems. The Government is making worldwide efforts to attract investors and has established important incentives so that investments will be profitable to those who venture to come in even as they are consistent with broad aims of development.

The picture for U.S. investors is definitely inviting as Zaire's markets keep expanding along with rising real incomes. A trend toward industrial diversification favors the establishment of plants producing import substitutes, especially in the consumer goods market.

A good example of this is the Goodyear tire plant now under construction. Also, Ford and General Motors have made proposals for the establishment of auto and truck assembly plants. In the mining field, Standard Oil of Indiana is participating in an international consortium which has been given a concession to mine copper. Gulf Oil Corp. has struck oil offshore.

KINSHASA, ZAIRE—*The former Leopoldville, Congo is rapidly emerging as one of the more modern capitals in Africa. The new name became effective Oct. 28.*

Intercontinental has just completed a first class hotel in Kinshasa. Continental Grain is building a flour mill at Matadi. A proposal for a sugar plant is anticipated shortly and both Kaiser Aluminum and Alcoa are negotiating for aluminum ingot factories near the site of the Inga hydropower complex.

More room for U.S.

In the trade area, there is certainly more room for U.S. products, especially for medium and heavy industrial machinery and equipment in the expanding and modernizing mining and metallurgical sector. There should be an increasing market, also, in the transport sector for roadbuilding and maintenance equipment, vehicles and engines and aircraft and parts.

U.S. sales to Zaire last year reversed a downtrend in the share of the market by scoring a 42 percent rise.

Eliminate middlemen.

Since it is officially a goal to eliminate indirect or "triangular" trade relationships, American businesses with representatives or distributors in Zaire should attempt to deal directly with home offices rather than European home offices. In addition, new firms establishing here should try to locate Zairian distributors or firms with Zairian participation. Efforts to supply local managers and the setting up of training programs are also quite favorably regarded.

Finally, U.S. firms should expect strong competition from established European and Japanese companies, which means they have to make every effort to offer competitive credit terms, improved delivery schedules, and good after-sales support.

New Government Inherits Serious Ugandan Problems

Uganda is undergoing a dramatic change in Government direction, according to the U.S. Embassy in Kampala, moving from the increasingly socialistic regime of President Milton Obote to military rule under General Idi Amin following a coup d'etat in January. Having inherited serious budgetary, balance of payments, and investment difficulties, the new Government is confronted with a situation which shows few signs of immediate improvement.

Some factors beyond the control of the Government, including local climatic and world marketing conditions, have contributed to these difficulties. Of more importance, however, have been the budget deficit and the composition of Government expenditures, which have suffered as a result of security problems internally and along the Tanzania and Sudan borders, necessitating greatly increased military outlays.

EMBASSY HOUSE, KAMPALA — *The U.S. Embassy, located in this building, states that Uganda's economy is being steered onto a less nationalistic path.*

Although the new Government has swung the direction of the economy back on a course more oriented towards private enterprise by rescinding most of the widespread Obote nationalization actions and although it warmly encourages foreign private capital, the potential investor may be deterred by the unsettled economic conditions, as well as regional strains affecting the potential of the East African Community.

Another factor affecting the economy will be Ugandanization and the gradual departure of noncitizens, especially Asians, who control most of the retail and wholesale trade, as well as much of the manufacturing industry.

U.S. commercial ties with Uganda center largely around coffee, of which America last year purchased $51 million worth, making the United States the largest single buyer of Uganda exports.

Although Uganda in recent years has maintained a favorable balance of trade with the United States of about seven to one, American exporters and manufacturers are becoming increasingly aware of the relatively small but growing Uganda market, and imports from the United States thus far in 1971 are rising for the second straight year.

American investment in Uganda to date has been small, amounting to about $10 million, and is primarily in petroleum product distribution and banking.

Under Uganda's Third Five-Year Plan, 1971-76, real gross domestic product is forecast to grow at an average annual rate of 6 percent, with investment of $1 billion for the five-year period. Total development expenditure by the public sector is estimated at $658 million, of which about two thirds will be spent by the central government and the balance by Government corporations, local authorities and the East African Community. Central Government outlays alone will represent an increase of almost 50 percent above the level achieved during the Second Plan period.

A major emphasis in industry will be the development of activities based upon the use of locally available materials. The main projects already underway or nearing commencement include a new sugar factory, a cotton spinning mill, expansion of the Hima cement plant and proposals for salt and cobalt extraction plants, the utilization of magnetite for the expanded East African Steel Corporation, and a leather tanning factory.

U.S. has higher sales

Nineteen seventy proved to be a near-record year for U.S. exports to Uganda, with their value increasing 37 percent. Of Uganda's six major overseas (i.e. excluding Kenya and Tanzania) trading partners, the United States was the only one to increase its sales, as total imports from abroad declined by 5 percent. Sales rose to $7.2 million, and the U.S. share of the overseas import market moved up to 6 percent. Britain maintained its traditional one third hold, Japan fell to 11 percent and West Germany declined to 9 percent.

The United States achieved its largest export gains in the general categories of machinery and transport equipment, manufactured goods and chemicals, which together accounted for 83 percent of U.S. exports to Uganda.

The American supplier must consider a number of factors in examining trade opportunities in Uganda. Small though the market is, intense competition from other industrialized nations can be expected. Representation should be direct, rather than through Nairobi-based agents. The Government is continuing to insist that lines of trade run directly between exporter and importer. Also, it is

increasingly important that local representatives be citizens of Uganda.

U.S. salesmen should be prepared to visit Kampala for longer periods of time. In addition, exporters are advised to quote cif Mombasa prices, rather than fob, and to keep their local representatives better informed about new lines and products.

Even more important, with regard to mechanical equipment, they should ensure that their representatives maintain adequate stocks of spare parts and provide complete servicing facilities locally.

Costa Rica's Rapid Economic Growth To Drop Off To More Moderate Rate

Costa Rica's rapid rate of growth over the past five years is expected now to drop off to a more moderate 3 to 5 percent increase, in real terms, in 1972.

The country's Gross National Product (GNP) grew by an estimated 7.6 percent in 1970, following the record 9.5 percent real rate of growth in 1969.

The increase in 1970 was largely attributable to the rapid increase in export earnings (up 21 percent) and a very high level of business investment (up 20 percent). Largely financed by foreign private investment, industrial exports to the other Central American Common Market (CACM) nations and agricultural and beef shipments to the rest of the world provided much of the fuel for rapid growth. In contrast, the export picture over the next several years appears only moderately good, with the annual growth rate in this sector not expected to exceed 7 or 8 percent, the U.S. Embassy in San Jose reports.

At the same time, however, a major increase in government investment for the domestic economy is beginning. Costa Rica has begun an intensified program of highway construction and maintenance, as well as other infrastructure development involving ports, electrification and water services. Thus the medium-term prospects for the Costa Rican economy will depend to a large extent upon how well the transition is made from an orientation toward foreign private investment to one based upon domestic —primarily government—investment.

This year and next may see only moderate (3 to 5 percent) growth by Costa Rican standards, but momentum should pick up again by 1973, when this phase of internal consolidation gets well underway and new export industries are developed.

Construction grew most

Agriculture (principally bananas and coffee) remains the largest sector in the Costa Rican economy, but the construction sector grew most during 1970. This high level of construction activity will continue for the next several years, although the mix should change from commercial construction toward infrastructure projects and private housing.

Industrial output expanded on a broad front in 1970, and has continued to grow during 1971. Industrialized food products, which account for one third of all manufacturing, are the fastest growing segment of this sector, and can be expected to continue to grow at a substantial rate.

Although inflationary developments are always a potential problem, the only price indices available held steady during the first eight months of 1971.

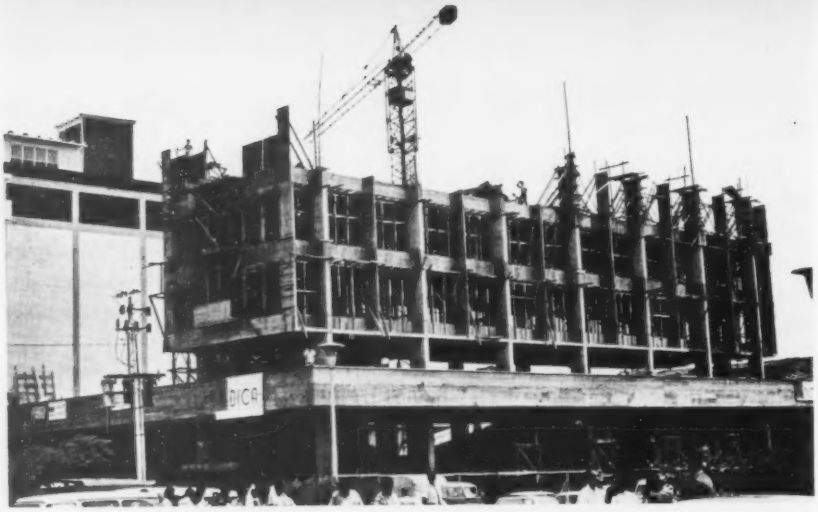
Total imports grew by 29 percent to $316.7 million in 1970, and continued to grow during the first nine months of 1971 at a pace 10 percent above the corresponding period for 1970. A large increase in liquidity had been provided by the high prices at which the 1969-70 coffee crop was sold, which was reinforced by an expansionary domestic credit policy during late 1970 and early 1971.

All this cash moved quickly into consumer spending, as evidenced by the substantial increase in 1970 imports of consumer durables: motor vehicle imports rose 29 percent, air conditioner imports more than doubled, and domestic appliance imports were up by 65 percent.

As a result, the Costa Rican balance of payments turned sharply negative during 1970 (after an excellent year in 1969), and the nation's international monetary reserves fell by $11.6 million. These reserve losses continued during the first half of 1971, and the evident disequilibrium in the balance of payments led to the splitting of the exchange rate on June 19 and the subsequent adoption of a complex multiple exchange rate system.

CACM trade expands

Costa Rica's trade with the other CACM members, after stagnating in 1969, grew rapidly in 1970, with exports rising by 22 percent and imports climbing 34 percent. During the first six months of 1971, imports from CACM nations increased 16 percent over the corresponding period in 1970, while exports remained at the same level. The effect of the faster growth in imports was to increase Costa Rica's trade deficit with the CACM to $14.2 million at the end of the first six months of 1971. This figure compares with a deficit of $22.5 million for the entire year of 1970 and $13.5 million for 1969. Imports of four sensitive items—textiles, clothing, shoes, and eggs —had increased so sharply by mid-1971 that Costa Rica persuaded its partners to agree to a voluntary



TYPICAL SIGHT IN SAN JOSE—*High-rise office buildings are going up all over the city. Costa Rica's current rapid construction rate should continue for some time.*

system of self-regulation of shipments of these goods to Costa Rica.

Although Costa Rican support for the Common Market continues to be strong, this growing trade imbalance has generated strong pressures to reduce the deficit. Despite these pressures, Costa Rica recently took the initiative to propose modifications in the Common Market mechanisms, including the establishment of a high level executive body which would be empowered to resolve many of the problems confronting the CACM.

Costa Rica continues to attract foreign private investors due to its political and economic stability, favorable business climate, and provision for financial incentives for some types of investments. The trend in new investment in Costa Rica seems to place less emphasis on manufacturing industries and more on agricultural and cattle enterprises, tourism proposals, and land development projects.

Nevertheless, in Costa Rica's dynamic society, some change is to be expected. The Legislative Assembly recently rejected the granting of petroleum exploitation concessions to foreign companies, insisting instead that contracts for oil exploration be let, reserving all concession rights to the state. Declining tax revenues have recently led the Government to seek renegotiation of contracts with the banana companies operating in Costa Rica. Foreign businessmen are also concerned by the vague wording of new tax proposals, fearing that when enacted there may be provisions discriminatory to foreign investors.

The complicated system of exchange surcharges and a split rate is cumbersome and will probably be replaced or further altered during the coming year, always with the intention of reducing consumption of non-essential imports. Due to a backlog of applications totaling over $120 million, there are now substantial delays between the time an importer applies for foreign exchange (at the official rate) and the date he receives it—although he can always purchase it at the free rate if his suppliers are pressing for payment.

Increasing competition

In 1970, the United States supplied 35 percent of Costa Rica's imports and purchased 47 percent of its exports. The import percentage is the same as for 1969, but has declined from 46 percent ten years ago. In part, this is due to the increased importance of imports from other CACM nations, but it is also indicative of the increasing competition for the market.

Costa Rica's exports to the United States are largely subject to statutory quotas and thus are not affected by the temporary U.S. import surcharge.

Costa Rica is actively seeking to expand and diversify its exports. A recent trade mission to the Soviet Union and other Eastern European countries concluded commercial agreements which oblige Costa Rica to purchase industrial goods—mainly electrical machinery and equipment—in order to sell bananas and surplus coffee.

Regardless of the results of these efforts, Costa Rica will remain a good market for the United States. Since the colon is linked to the dollar, U.S. exporters should gain an advantage over Costa Rica's other principal suppliers—Japan and West Germany—due to the appreciation of their currencies.

Expected disbursements from external assistance in 1972 should increase to $46.4 million from $31.3 million in 1971, and this higher level should be continued into 1973. Most of these funds are committed to already-let contracts for infrastructure projects. Nevertheless, more than $20 million of the 1972 and 1973 funds will be disbursed through open bidding for electrical generating and distribution equipment, telecommunications items, waterwork systems, and port development projects.

In addition to the traditional export opportunities in industrial machinery and electrical machinery and equipment, U.S. exporters to Costa Rica will find new markets in educational materials and audio-visual equipment as a result of the government's educational development plans.

Another promising area is that of civil aviation—not only has the Government embarked upon a ten-year development plan for San Jose's international airport, but the private aviation sector is constantly growing and demanding more sophisticated equipment.

Additional export opportunities will result from the government's undertaking to provide highway and port facilities for the $120 million ALCOA aluminum refinery, on which work should begin in 1973.

World Trade Actions

Jordan In New Import Policy; Denmark Imposes Surcharge

Jordan: The Government has announced a new import policy which became effective Sept. 16. With certain exceptions, notably government imports, all imported goods must have an import license and must enter Jordan via the port of Aqaba. Goods exempted from this port requirement are: (1) goods shipped overland from the country of origin; (2) goods imported by air or parcel post direct from the country of origin; (3) goods imported by the Royal Palace, the diplomatic corps, philanthropic, religious and scientific societies; (4) goods contributed or donated to Jordan; (5) aircraft fuel which is not produced locally; (6) used personal and household effects; and (7) any other goods excluded by a decision of the Council of Ministers. A fine of 20 percent of the value of the goods is imposed on imports entering other than through the port of Aqaba. This penalty may be lowered on food-stuffs and goods for government use by a decision of the Council of Ministers.

In its new policy, Jordan has prohibited or restricted a number of items. Prohibited goods include passenger sedan vehicles operating on fuels other than benzine; certain trailers and half trailers except agricultural trailers; gambling and lottery machines; and all kinds of cigarettes. The following are prohibited unless authorized by the concerned Government officials: machines, equipment and moulds used for the establishment, expansion, or renewal of factories; vegetable oils and vegetable and animal fat; cement; petrol and extracts which are produced locally; leathers; alcohol and araq; carbonic gas and soda; carton and paper; tomato paste; some agricultural products but excluding imports of international organizations and philanthropist societies; wireless receiving and transmitting sets (excluding radio and television sets); firearms, shotguns, ammunition, explosives and fireworks; medicines, drugs, saccharin, dolsin, bektin, B400, sodium beganite seclamit; foodstuffs containing saccharin; dyes; essences used in making foods; agricultural and veterinary medical supplies; and all raw materials imported for industrial or other purposes. In addition, the law allows the Council of Ministers or the Minister of Economy to prohibit or limit imports of any item, to control the country of origin or to confine imports of items to the Department of Supplies and Price Control.

A fee of 4 percent of the value of the goods (cost plus freight) will be collected prior to issuance of the license. For goods excluded from licensing, the fee will be collected at the time of clearing through customs. Certain goods including antibiotics, fertilizers, paper for printing, some agricultural equipment, machines, equipment and other items may be exempted from payment of the fee on the approval of the Council of Ministers.

For specific import policy and duty information concerning individual commodities write to Near East-South Asia Division, BIC-896, U.S. Department of Commerce, Washington, D.C. 20230. Please include the Brussels Tariff Nomenclature, the U.N. Standard International Trade Classification, the U.S. Schedule B export commodity number or a complete product description when requesting information.

Denmark: Approximately 58 percent of all Danish imports are now subject to a temporary 10 percent surcharge levied on the c.i.f. value of the good. The law, effective Oct. 21, exempts raw materials and food as well as certain industrial products. The surcharge is scheduled to be reduced to 7 percent on July 1, 1972, with a further reduction to 4 percent on Jan. 1, 1973, before it expires on March 31, 1973. The surcharge will be rebated when the imported products are used in the production of goods for export. Further information on exempted product categories is available from BIC-888, U.S. Department of Commerce, Washington, D.C. 20230.

Argentina: Provision for the National Registry of Technological License Contracts and Transfers was made in an Argentine law (No. 19,231) issued on Sept. 10. All agreements to make payments or to provide services to foreign entities regarding trademarks, patents, designs, models, detail engineering, technical advice, technical information and technical training are to be registered. Registration may be denied in cases where; (a) there is no innovation or technological contribution; (b) agreement terms are unbalanced; (c) Argentine operations are altered or regulated; (d) a requirement as to sales in, imports into or exports from Argentina is present; or (e) provision is made for judicial action outside Argentina. All licensing arrangements must be registered to have legal validity in Argentina. The Central Bank is not to authorize remittances abroad based on unregistered agreements. Lump sum purchases of foreign technology are favored rather than shares in gross profits. License and royalty fees are to be regulated.

A copy of an unofficial English translation of Law 19,231 may be obtained on loan from the American Republics Division, BIC-886, U.S. Department of Commerce, Washington, D.C. 20230.

Ecuador: The Central Bank announced on Sept. 30 an additional 10 percent reduction in the level of prior deposits for List II (nonessential) imports for the fourth quarter of 1971. This is in accordance with Monetary Board Resolution No. 550 which instituted the process of gradually eliminating all prior import deposits.

Greece: On Nov. 1 the Government formally announced several adjustments in the implementation of the Greece-EEC Association Agreement. The seventh consecutive 10% tariff reduction on certain products originating in EEC countries took effect on Nov. 1. With this cut, the total duty reduction on products on which Greece is required to eliminate import duties over a 12-year period now becomes 70%. The products involved include industrial products which are not currently being manufactured in Greece, and certain farm products. The next 10% tariff cut is scheduled for Nov. 1, 1972. There was no tariff reduction made on EEC products subject to the 22-year tariff elimination process. The fifth reduction on products in this category is slated for Nov. 1, 1972 and will be 8%.

Along with the seventh 10% tariff reduction, the Greek Government also announced its seventh 10% reduction in prepayment deposits on products subject to the 12-year tariff elimination schedule. On agricultural products not subject to tariff reductions, as well as on products of the European Coal and Steel Community, there have been no downward readjustments in the prepayment requirements.

Canada: The Minister of Finance has directed the Canadian Tariff Board to make a study of the provisions of the Customs Tariff relating to pleasure craft or pleasure vessels and their component parts. This directive was prompted by representations that the tariff structure provides an unnecessarily high level of protection to Canadian manufacturers and builders and encourages unduly small scale production by a large number of producers in Canada.

The Canadian tariff numbers of items to be reviewed are: 44002-1, 44003-1 and 44004-1 as they relate to craft, vessels and hulls; and tariff items 44019-1, 44022-1, 44025-1 and 44028-1, as they relate to parts or equipment.

Proposals concerning the rates of duty and wording of the pertinent tariff items or any newly proposed tariff items should be filed with the Secretary, The Tariff Board, Ottawa, Ontario K1A OG7, not later than Dec. 31. Briefs or submissions in support of any views concerning the study should be filed in writing not later than Feb. 11. A public hearing will be held in the Board's courtroom at 219 Argyle Ave., Ottawa, commencing March 20. Persons planning to attend should notify the Secretary not later than March 10. Two hundred copies of briefs or submissions should be filed with the Secretary.

Those who want further news, but who are not on the Board's mailing list, should request the Secretary to place their names on such list for Reference 149.

U.S. Had $96 Million Reinsurance Loss In 70

A survey of reinsurance transactions between U.S. insurance companies and insurers in other countries shows that U.S. insurance companies made net payments of $95.8 million to foreign insurers in 1970.

The Commerce Department, which took the survey, also reported that although reinsurance accepted from abroad by U.S. insurance companies is much smaller in amount than that ceded abroad, since 1955 it has been growing at a faster pace.

The term "reinsurance" describes the transfer by insurance companies of a portion of the liability they have assumed to other insurance companies, that is, reinsurers. The reinsurer receives a proportionate share of the original premium and shares in the payment of losses incurred by the ceding insurance company. The purpose of reinsurance is to make it possible for a primary insurer to underwrite risks which it could not otherwise handle and to avoid large year-to-year fluctuations in its underwriting results.

In 1970, U.S. insurance companies paid $451.5 million in premiums for reinsurance purchased from foreign reinsurers and recovered from them $283 million in losses. The $168.5 million excess of premiums paid over losses recovered was offset by net receipts of $72.7 million by U.S. reinsurers on reinsurance they sold to foreign insurers. U.S. insurance companies received $248 million in premiums on reinsurance sold abroad and paid losses thereon of $175.3 million.

Of the $451.5 million of premiums paid by U.S. ceding insurance companies in 1970, British reinsurers received $324 million, for 72 percent of the total.

Of the $248 million premiums received by U.S. insurance companies on reinsurance sold abroad, $166.8 million or 67 percent came from Western Europe.

The $248 million in premiums received by U.S. insurance companies in 1970 on reinsurance accepted from abroad was 7.5 times the premiums of $33.0 million received in 1955. In contrast, the $451.5 million in premiums paid in 1970 for reinsurance ceded to foreign reinsurers was about 2.1 times the premiums of $207.1 paid in 1955.

The Dollar Area comprises the United States, Bolivia, Canada, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Liberia, Mexico, Nicaragua, Panama, Philipines, and Venezuela.

Worldwide Business Services

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors overseas. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine. Details on licensing and joint venture proposals, opportunities to sell to foreign firms and government agencies, and appoint agents, and on major construction and expansion projects and U.S. visits by foreign buyers are presented in this section.

Licensing, Investment Abroad

0192—UGANDA—Joint venture for development of **flower plantation** to produce various fresh cut flowers for export to Western Europe. Write: Uganda Development Corp. Ltd., P.O. Box 7042, Kampala, Uganda. P-71651

2020—SPAIN—Milk products manufacturer seeks joint venture to expand production of **fresh sterilized milk** to 8,000 liters/hour. Firm is now producing butter, condensed and evaporated milk in two plants. Sales volume over $4 million. Firm seeks financing and equipment in exchange for equity and management position. Sr. Antonio Massague Codorniu, Massaque y Vila, S.A., Balmes 25, Barcelona (7), Spain. WTD. P-71655

2800—ITALY—Major firm with worldwide manufacturing, distribution and sales facilities seeks licenses featuring advanced technology in fields of **pharmaceuticals and specialty or fine chemicals.** Montecatini Edison, S.p.A, Largo G. Donegani 2, Milan, Italy, Attention: Dr. Roberto Pirani. Potential licensors are requested to send copies of correspondence to American Consulate, Plazza della Republica 32, Milan, Italy. Attention: Commercial Officer. WTD. P-71661

2815 — TURKEY — License, technical know-how and U.S. technicians sought to manufacture **pigment dispersions for textile printing and viscose dyeing.** Royalty, fixed fee arrangement subject to negotiation. Firm produces products for textile processing, paints, varnishes and adhesives. Established in 1965, firm employs around 100. Any licensing agreement would require prior approval of Turkish State Planning Office and specific concurrence in any agreed upon royalty payment. Organik Kimya Sanali ve Ticaret A.S., Muhurdarzade Han 206/207, Bahcekapi, Istanbul, Turkey. P-71665.

2834, 2840—SWITZERLAND—Manufacturing rights for **novel cosmetic preparations, household sanitation products, and pharmaceuticals.** Also interested in joint venture or subcontracting arrangement. Marketing area would include Switzerland, Austria, West Germany; possibly France and Italy. Firm presently produces cosmetics, pharmaceuticals used in skin treatment; has established sales organizations. Write, preferably in French, to Mr. Maurice Gros, President, Laboratories F. B. Unis SA, Chemin des Creuses 9, 1008 Prilly, Lausanne, Switzerland. WTD. P-71662

2851—GERMANY — Leading manufacturer of **corrosion resistant products** seeks licenses to expand line. Interested in all types of corrosion resistant paints, compounds, and tapes. Established 1922; employs 400. Denso-Chemie GmbH, 24 Felder Str., 509 Leverkusen-Rheindorf, Germany. WTD. P-71660

3069—ENGLAND—Licenses to manufacture **rubber or synthetic rubber products** for use in engineering, automobile accessory, safety and leisure fields. Firm currently makes rubber moldings, printing compounds, conveyor roller coverings and children's playground equipment. It employs 250. The Sutcliffe Moulded Rubber Co. Ltd., Ossett, Yorkshire, England. WTD. P-71657

3079—CZECHOSLOVAKIA—License to produce **injection molded plastic bottles** for pharmaceutical industry. Capacities of 16 to 112 milliliters one group of bottles; 16 to 190 milliliters for another group. Uses polypropylene as raw material. Vitezslav Bohac, Asst. Manager, Polytechna, Vaclavske nam. 8, Prague 1, Czechoslovakia. P-71646

3111—UGANDA—Collaboration for **establishment of a tannery to process goatskins and sheepskins.** Plans call for production of finished leather for domestic consumption and semi-processed leather for export. Feasibility study available. Write: Uganda Development Corp., Ltd. P.O. Box 7042, Kampala, Uganda. P-71652

3271—JAMAICA—Technical know-how and equity financing for expansion of 25-year-old **concrete block and aggregate producer.** Mr. Pat Stephens, Mng. Dir., Concrete Blockmaking Co., Ltd., 32 Red Hills Rd., Kingston 10, Jamaica. WTD. P-71647

3433—THE NETHERLANDS — License to manufacture **incineration systems for industrial waste disposal.** Interested in installations based on rotary furnace principle. Firm is major producer of heat treating equipment for metals, glass and ceramics, and gas generators. Markets worldwide. Has annual sales of approximately $40 million, employs 3,500. Mr. A. H. Lehn, Smit Nijmegen Electrotechnische Fabrieken N.V., 336 Groenestraat, Nijmegen, Holland. WTD. P-71656

3540, 3532—NEW ZEALAND — Manufacturing rights for **machine tools, industrial equipment, logging and mining machinery.** Market in New Zealand and Pacific area. Interested in equipment requiring small batch production of 50 to 500 products. Firm has manufactured large steam valves, firefighting equipment and logging winches. Principal activity has been in ship repair and heavy industrial maintenance. Associated company specializes in plate and fabrication work. Mr. Jack P. Klootwyk, Eng. Mgr., Anchor Shipping and Foundry Co. Ltd., P.O. Box 1007, Port Nelson, New Zealand. WTD. P-71648

3542, 3553—FRANCE—Manufacturer of **machine tools, wood working machinery** and mechanical tools seeks licenses to make equipment allied to present line. Wants to utilize current production machinery. Equipped for foundry, metal forming and cutting, and assembly. Employs around 12,000, operates several large plants. Mr. M. Le Foll, C.G.I.M.F., 28 boulevard Vaulabelle, 89-Auxeere, France. WTD. P-71658

3551, 3535—GERMANY — Manufacturer of **coffee mills, coffee roasting plants and pneumatic conveyors** seeks licenses for the manufacture of these products in Germany. Firm was established in 1885 and is well established in EEC, EFTA, and other markets. Present sales close to $2 million. Ferd. Gothot GmbH, Maschinenfabrik, 433 Muelheim/Ruhr, Germany. WTD. P-71645

3561—GERMANY—Inventor of **inline-booster-pump for water systems** up to 40″ inside diameter seeks licensing or joint venture agreement with U.S. manufacturers of large machinery. Will consider cross licensing and distribution of related products of U.S. firms in Germany and Western Europe. WTD. Dr. Ing. H. G. Bartels, 232 Ploen (Holstein), West Germany, Leutjenburger Strasse 26. P-71650

3575, 3611, 3662—ENGLAND — License sought to manufacture **industrial electronic and electro-mechanical control and measurement devices; equipment concerned with the application of in-line electronic inspection and test instrumentation; and electronic and electro-mechanical digital readouts and displays and similar peripherals associated with the first two listed devices.** Firm established in 1964 has around 80 employees, is designer and producer of above listed products; specializes in temperature control and monitoring systems, and electronic process control units. Sells in U.K., EEC, EFTA, Abbey Electronics & Automation Ltd., Delamare Road, Cheshunt, Herts., England. WTD. P-71653

3585—YUGOSLAVIA—Largest firm in thermal control field seeks license or joint venture to manufacture **climate**

control equipment. Seeks new products and technologies in the air conditioning, heating, and ventilation industry; offers access to East European markets. Firm operates three plants, employs about 1,500. Product line includes electrostatic ventilation systems, fans, space heaters, dust control equipment, oil burners injectors, and other apparatus. Write: Office of International Investment, BIC-878, U.S. Department of Commerce, Washington, D.C. 20230. P-71642

3589—**AUSTRIA** — Licenses for the manufacture of **institutional kitchen equipment** such as deep fryers, frying tables, boiling kettles, meal distribution installations, thawing devices for deep frozen food, dishwashers, etc. Austrian company manufactures institutional cooking ranges. Has 130 employees and sales of $2 million annually. Heiz- und Kochgeraetefabrik Wels Ges.m.b.H, Gaertnerstrasse 11-13, P.O. Box 205, A-4600 Wels, Austria. WTD. P-71659

3651—**GERMANY** — Electronic products manufacturer seeks licenses to make **loudspeakers, amplifiers, receivers and components for electronic and electric equipment.** Firm also willing to represent U.S. manufacturers of above assembled units on a long term basis, but not interested in contacts with U.S. wholesalers and exporters. Employs around 30, mostly skilled technicians. Hanns Schaefer, 3000 Hannover, Hagenstrasse 26, Germany, Attention: Mr. H. D. Mueller. WTD. P-71666

3711, 7538—**BELGIUM**—Joint venture to permit expansion proposed by long established **assembler of automobiles. Firm also manufactures parts and repairs motor vehicles, machinery and construction equipment.** Yearly sales around $700,000; about 165 employees. Plant approximates 100,000 sq.ft. on 2½ acre site. Willing accept majority or minority equity position. Additional information: Belgian Consul. Gen., Industrial Sect., 50 Rockefeller Plaza, New York, N.Y. 10020. P-71664.

5812—**SINGAPORE**—Joint venture for operation of **self-service cafeteria** (which would be Singapore's first) sought by developer of new, modern office building complex. Developer prepared to offer management contract for this venture. Mr. R. M. H. Goei, Director, Goldhill Properties, 56 Telok Ayer St., Singapore 1. P-71654

6512 — **ARGENTINA — Industrial sites available within new industrial park** located 350 kilometers south of Buenos Aires in city of Olavarria with 75,000 population. Park covers more than 60 acres. Access roads, gas supply, telephone service, health facilities, and electric power is under expansion. Sales terms for sites 25% down and the balance in ten years at 8% interest with two-year grace period for first installment. Parque Industrial Olavarria, Estacion Terminal de Omnibus, Olavarria, Provinca de Buenos Aires, Argentina. P-71644

7011 — **YUGOSLAVIA** — Large travel service firm along with a heavy engineering-construction consortium seek U.S. joint venture partner for **giant tourist complex** in the Dubrovnik area. Capital investment up to 49% of planned project especially welcome. First stage, estimated cost $18 million, calls for facilities providing 2,600 beds. Yugoslav Government and business leaders are particularly eager to encourage the rapidly growing tourist traffic on the Adriatic coast, of which Dubrovnik is the principal attraction. Write: Mr. Jakov I. Cacina, Chairman, ATLAS Travel Agency, Pile 1, Dubrovnik, Yugoslavia 50000, or Mr. Vladimir Sambolec, Director, Consortium for Investment in Tourism, INGRA Proleterskih brigada 62, Zagreb, Yugoslavia 41000. Additional information on this proposal available from the Office of International Investment (BIC-878), U.S. Department of Commerce, Washington, D.C. 20230. P-71663

Licensing In U.S.

For additional information on opportunities to manufacture foreign firms' products in the U.S., write Commerce's Office of International Investment, BIC-874, Bureau of International Commerce, Department of Commerce, Washington, D.C. 20230, telephone Area Code 202-967-2248, referring to the appropriate FILE number assigned each opportunity listed below.

AUSTRIA—A private party offers a license to a U.S. firm for his new **powdering and granulating process** for use in powder metallurgy for petrochemistry, pyro-technique, welding-technique, utilization. Production costs savings more than 50 percent are claimed by the party as well as uniform granulation, lower investment costs, reduced power requirements and an almost complete elimination of explosion dangers. **File 2105**

AUSTRIA—An inventor, and former manufacturer, of a **safety valve for containers** offers manufacturing license arrangements to a U.S. firm. The valve may be fixed on containers either by screwing or welding and is utilized for containers of alcoholic beverages, soft drinks, fruit juices, gasoline, crude oil and liquefied gas. **File 2106**

GERMANY—An established German manufacturer of **automobile accessories, car jacks, towing cranes and builders' hardware,** seeks U.S. licensing arrangements for their 1) window fittings; 2) hydraulic and mechanical truck and automobile jacks; 3) new automobile parts and accessories. This company enjoys product acceptance in both EEC and EFTA countries. **File 1888-R**

ITALY—A well-reputed Italian firm offers a manufacturing license for the production of its **patented building blocks** made of 5 mm. thick glass and with a concrete frame used in construction of external walls, especially walls of industrial plants. The blocks can be either sealed or opened as windows. The manufacturer claims they are thermo-insulating corrosion resistant and inexpensive. **File 2107**

NETHERLANDS—A manufacturer of a **coin operated ice cream vending machine** offers his product for manufacturing under license to U.S. firms. The manufacturer claims uniqueness in that no mechanical or electrical components are housed inside the freezing compartment. The capacity is 225 ice cream sticks or 110 ice cream cups. It is presently patented in 16 countries. The company is well established and has been operating successfully for many years. **File 2108**

SWITZERLAND—A Swiss manufacturer of **road and highway construction and maintenance equipment** offers a manufacturing license to a U.S. firm to make their vibrating compactors used for compacting materials in road construction. The compactors can be installed on already existing construction machines, tractors or special vehicles. They were developed for construction of European expressways. **File 2009-R**

Western Kenya Province Lists Investment Openings

Kisumu, the third largest city in Kenya with a population of 40,000, has just issued a list of industrial projects offering opportunities for investment, along with an attractive brochure on the municipality. The possibilities include a brewery, distillery, and plants for producing oxygen, starch, fish nets, fiber boards, twine, boats, hand tools and agricultural implements. To obtain copies of the list and a brochure write Town Clerk, P.O. Box 105, Kisumu, Kenya.

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Office of International Investment, BIC-878, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to specific proposals.

For additional information on opportunities to manufacture foreign firm's products in the U.S. described under "Licensing In U.S.", write Commerce's Office of International Investment, BIC-874, or call 202-967-2248 referring to the File Number assigned each opportunity.

WTD indicates that a World Trade Directory Report containing financial and background information on the foreign firm is available for $2 from the Department of Commerce, BIC-924, Washington, D.C. 20230, or from any Commerce Field Office.

Foreign Trade Opportunities

These trade opportunities are based on reports received from the U.S. Foreign Service by the Business Opportunities Staff and other units of the Bureau of Domestic Commerce (BDC), U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1967 Census of Manufacturers, used extensively by Government and industry.

U.S. firms should be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only firms or individuals with good reputations. However, the Department cannot be responsible for any trade relations.

The mark (●) indicates that this trade opportunity is a request for bids by a foreign government agency. A (★) at the end means that additional information may be borrowed by U.S. firms from the individual division of BDC. To avoid delays, requests for loan material should specify the country, commodity and foreign government agency.

WTD indicates that a World Trade Directory Report containing financial and business background information on the foreign firm is available for $2 from the U.S. Department of Commerce, BIC-924, Washington, D.C. 20230.

Direct Sales

Specific foreign firms have expressed interest in direct purchases of the products below. See also the "Agencies" listing.

Miscellaneous metal ores

10990—PAKISTAN—Antimony for use in manufacture of lead acid storage batteries. Multi Traders (importer, dist., agent), P.O. Box No. 1351, 22 McLeod Rd., Lahore. WTD 10/71.

Sighting, fire control equipment

19410—ITALY—Telescopic sights (riflescopes) for small firearms. Guglielmo Demarchi & C. (importer, dist., agent), Via Gobetti 11, 10123 Torino. WTD 4/71.

Small arms

19512 — ITALY — Small firearms parts, attachments, specifically including gun cases (metal, leather, plastic) and cleaning kits. Guglielmo Demarchi & C. (importer, dist., agent), Via Gobetti 11, 10123 Torino. WTD 4/71.

Small arms ammunition

19610—ITALY—Small firearms ammunition. Guglielmo Demarchi & C. (importer, dist., agent), Via Gobetti 11, 10123 Torino. WTD 4/71.

Dairy products

20222—GUATEMALA — Process cheese. CODICASA-Compañía de Distribución Centroamericana, S.A. (importer, dist., agent), 4a. Avenida 8-23, Zona 1—Apartado Postal 1145, Guatemala City. WTD 10/71.

Canning, preserving foods

20310 — GUATEMALA — Canned fish. CODICASA-Campañía de Distribución Centroamericana, S.A. (importer, dist., agent), 4a. Avenida 8-23, Zona 1—Apartado Postal 1145, Guatemala City. WTD 10/71.

20321—TAIWAN — Bottled applesauce for infants, net weight 4¾ oz. per bottle, quantity 5,000 bottles. Hiap Ho Trading Co., Ltd. (importer, exporter), 27, Lane 46, Tihwa St., Sec. 1, Taipei 101. WTD in prep.

20341 — TAIWAN — Dried, dehydrated cereal-fruit mixes for infants, packaged in paper boxes, net weight 8 oz. each, quantity 10,000 boxes. Hiap Ho Trading Co., Ltd. (importer, exporter), 27, Lane 46, Tihwa St., Sec. 1, Taipei 101. WTD in prep.

Grain mill products

20440—TOGO—Milled rice, byproducts; preferably long grain. Import 10 to 30 metric tons per order. Quotations c.i.f. Lome. Correspondence requested in French. Ets. E. Akpabie (importer, dist., retailer), 19, rue Maréchal Foch, B.P. 1787, Lome. WTD 10/71.

Bakery products

20520 — CANADA — Packaged crackers, packaged cookies. James G. Spurrell, Peter Pan Sales, Ltd. (importer, dist., agent), P.O. Box 1238, St. John's, Nfld. WTD 4/71.

Confectionery

20710—GUATEMALA — Confectionery products. CODICASA-Compañía de Distribución Centroamericana, S.A. (importer, dist., agent), 4a. Avenida 8-23, Zona 1—Apartado Postal 1145, Guatemala City. WTD 10/71.

Beverage industries

20853 — ITALY — Well-known brands of bottled liquors, including bourbon whiskey. Angelini Francesco, Aziende Chimiche Riunite A.C.R.A.F., S.p.A. (importer, dist., mfr.), Via Amelia 70, 00181 Rome. WTD 10/71.

20874—TOGO—Fruit juice products for soft drinks. Prices c.i.f. Lome. Correspondence requested in French. Société Togolaise d'Expansion Economique (SOTEXCO) (importer, dist., retailer), 24, rue de Bordeaux, B.P. 2054, Lome. WTD 10/71.

Food preparations

20999—TAIWAN — Natural gums for food processing including exudated gums, seed gums, seaweed extracts. Kwok Wah Trading Co., Ltd. (importer, dist., agent), 33 Chung Hsiao East Rd., Sec. 2, Taipei 100. WTD in prep.

Broad woven fabric mills, cotton

22112—GUYANA—Drills, sheeting, allied coarse, medium yarn fabrics. G. Bettencourt & Co., Ltd. Attn: John Vibart I. Henriques—Mng. Dir. (dist., agent, retailer), 19/20 Water St., P.O. Box 258, Georgetown. WTD 8/71.

22113—GUYANA—Cotton print cloth yarn fabrics (gray goods), twills, etc. G. Bettencourt & Co., Ltd. Attn: John Vibart I. Henriques—Mng. Dir. (dist., agent, retailer), 19/20 Water St., P.O. Box 258, Georgetown. WTD 8/71.

22114 — GUYANA — Denims, carded colored yarn fabrics (gray goods). G. Bettencourt & Co., Ltd. Attn: John Vibart I. Henriques—Mng. Dir. (dist., agent, retailer), 19/20 Water St., P.O. Box 258, Georgetown. WTD 8/71.

Broad woven fabric mills, manmade fiber, silk

22211—GUYANA—Fabrics; rayon and/or acetate, arnel, or equal, newer blends thereof both knitted, woven. G. Bettencourt & Co., Ltd. Attn: John Vibart I. Henriques—Mng. Dir. (dist., agent, retailer), 19/20 Water St., P.O. Box 258, Georgetown. WTD 8/71.

22212—GUYANA—Nylon, 100% filament fabrics, etc. G. Bettencourt & Co., Ltd. Attn: John Vibart I. Henriques—Mng. Dir. (dist., agent, retailer), 19/20 Water St., P.O. Box 258, Georgetown. WTD 8/71.

22214 — GUYANA — Polyester blends with cotton fabrics. G. Bettencourt & Co., Ltd. Attn: John Vibart I. Henriques—Mng. Dir. (dist., agent, retailer), 19/20 Water St., P.O. Box 258, Georgetown. WTD 8/71.

Floor covering mills, products

22710—AUSTRALIA—Carpeting, chiefly manmade or cotton fiber pile yarn, for entire interior of new 11,000 sq. ft. office building. Mr. Len Beioley, Mgr., Radio Station 4KQ Labour House, Edward St., Brisbane, Queensland 4000. WTD in prep.

22710—JAPAN—Carpets of 100% nylon, 60-70% nylon and the balance wool; other synthetic floor coverings. Color: either one color or various colors. Requests c.i.f. Japan price, delivery time, payment terms. Bestsellers Ltd. (importer, dist.), 1, 1-chome, Tsunohazu, Shinjiku-ku, Tokyo. WTD in prep.

22720—ITALY—Bathmats, other household tufted carpets. SIRSA, Societa' Italiana Resine Sintetiche Affini (importer, dist., retailer), Via Barberini 3/d, 00187 Rome. WTD 10/71.

Textile goods

22981 — ITALY — Ropes, artificial fiber combinations, for pleasure boats, including anchor, sailing lines. Barracuda Sport (importer, agent, retailer), Via Flavia 3/A, 00187 Rome. WTD 2/71.

Fabricated textile products

23990 — ISRAEL — Seat-safety belts including shoulder harnesses for automobiles. Shahar Ltd. (importer, retailer, repair-shops), 35 Bar-Kochba St., Petah-Tiqva. WTD 9/71.

Partitions, shelving, lockers, office, store fixtures

25420—SWITZERLAND—Specialty metal store fixtures, tray stands, textile display fixtures, novelties, for supermarkets, department stores, exhibitions. Boppart & Co. AG (dist., mfr.), Rietbergstr. 49, 9403 Goldach. WTD 10/71.

Paper mills

26219—ITALY—Condenser paper. INCO S.p.A.-Condensatori (mfr.), 12 Via Selice, I 40020 Bubano-Mordano (Bologna). WTD 12/70.

Industrial chemicals

● 28100—HONG KONG—Alumina sulfate 3,800 long tons, 16% Al_2O_3, in Kibbled or granular forms only, packed in 112 lb. sacks. Bid deadline Dec. 10, Hong Kong Government. Tender with specifications enroute from Hong Kong to Chemicals, Petroleum and Rubber Division, BDC, arrival date unknown. A copy for review will also be sent upon receipt in Washington to the Department of Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102 (415-556-5868). U.S. Dept. of Commerce, BDC-712, Chemicals, Petroleum and Rubber Div., Washington, D.C. 20230 ★(202-967-3468).

● 28100—INDONESIA — Nitrogen fertilizer, either urea, min. 46% N, 1,100 m.t. or ammonium sulfate, min. 21% N, 1,850 m.t.; phosphate rock (natural), min. 36% P_2O_5, 850 m.t.; murate of potash, 60% K_2O, 1,150 m.t. and mineral magnesium sulphate (Kieserite) 26% MgO, 50 m.t., for State Plantation Enterprise IV. Quotation to be made only in following manner: net f.o.b. port of exit per unit, net f.o.b. port of exit total, and estimated maximum total ocean freight to Belawan, and total c.&f. Belawan. Bid bond ¾ of 1% of c.&f. total. Tender #2241/Ass. Prod. IV/TD/71. Delivery to arrive no later than May 1972. Bid deadline Dec. 27. Address all bids to B.C.U.-P.N. Perkebunan, DJL. DJENDERAL S. PARMAN 73, SLIPI, DJAKARTA. Tender with specifications enroute from Indonesia to the Chemicals, Petroleum and Rubber Division, arrival date unknown. A copy for review will also be sent, on receipt in Washington, to the Department of Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102 (415-556-5868). Chemicals, Petroleum and Rubber Div., BDC-712, U.S. Dept. of Commerce, Washington, D.C. 20230 ★(202-967-3468).

● 28100 — IRAN — Ferric chloride, 500 tons (300 tons Jan. 1972 and 50 tons for four following months), content of basic product not less than 97% $FeCl_3$, $6H_2O$, content of lead (Pb) not more than 10 p.p.m. Content of arsenic (As) not more than 5 p.p.m., fluorine (F) not more than 1%, copper (Cu) not more than .02%, zinc (Zn) not more than 1%, and manganese (Mn) not more than .1%. Product should not contain traces of poisonous substances (mercury, hexavalent chrome, barium). Bids should be submitted to National Iranian Steel Corp., Tehran, Telex 2334. A copy for review will be available at the Department of Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102 (415-556-5868). U.S. Dept. of Commerce, BDC-712, Chemicals, Petroleum and Rubber Div., Washington, D.C. 20230 ★(202-967-3468).

28180—PAKISTAN—Industrial organic chemicals. Multi Traders (importer, dist., agent), P.O. Box No. 1351, 22 McLeod Rd., Lahore. WTD 10/71.

Synthetic materials

28211—JAMAICA—Plastic sheets; specifications: unsupported, for manufacture of table mats, footwear, car mats, ladies shopping bags. Quotations c.i.f. Kingston. Mahidad Plastic & Rubber Co. Ltd., Attn: Francis Chan (dist., mfr.), 7 Brentford Rd., Kingston 5. WTD in prep.

Drugs

28347—SPAIN—Iron dextran complex. Correspondence requested in Spanish/French. Ufac-Hispania, S.A. (mfr.), Abad Maluenda, 3, Burgos. WTD 10/71.

Chemical products

28993—SPAIN—Fireproofing facing or lining materials or compounds for metal structures. Sociedad Ibérica de Pavimentos y Revestimientos, S.A. (dist.), Poniente, 34, Madrid (20). WTD 10/71.

Petroleum refining

29110—GERMANY—Green fluid, green delayed, calcined petroleum cokes. Gebr. Kiessel GmbH. Attn: Herr Schmitt (importer, dist.), 10 Muehldorferstr., 6800 Mannheim. WTD 4/71.

Plastic products

30795—JAMAICA—Molded plastic handles for ladies' shopping bags. Quotations c.i.f. Kingston. Samples, quotations requested. Manidad Plastic & Rubber Co. Ltd., Attn: Francis Chan (dist., mfr.), 7 Brentford Rd., Kingston 5. WTD in prep.

30797—ITALY—Plastic dinnerware, tableware, kitchenware. SIRSA, Societa' Italiana Resine Sintetiche Affini (importer, dist., retailer), Via Barberini 3/d, 00187 Rome. WTD 10/71.

Glass, glassware

32291—JAPAN—Table glassware including tumblers, plates, cups and saucers. Nippon Kigyo Trading Corp. (importer, exporter), Higashi P.O. Box No. 168, Nagoya. WTD 9/71.

Steel mill products

33100—INDIA—698 metric tons Fire box quality steel plates to ASTM-A-285-65-T grade C fully killed and normalized. Bid deadline Dec. 16. Mr. R. N. Gupta, Chief Purchase Officer, Beas Purchase Organization, Talwara Township, District Hoshiarpur, Punjab. Tender No. 1225/26W/BLS/PR/51457/51460. Copies of tender available from Iron and Steel Program, BDC-786, U.S. Department of Commerce, Washington, D.C. 20230 (202-976-2613).

Primary smelting, refining of nonferrous metals

33312—PAKISTAN — Refined primary copper. Multi Traders (importer, dist., agent), P.O. Box No. 1351, 22 McLeod Rd., Lahore. WTD 10/71.

Rolling, drawing, extruding of nonferrous metals

● 33500—BURMA—Supply of copper wire, rod and sheet of various quantities and sizes. Tender No. MEIC/B. R./17 (T) 10 (ML) 71-72. Bid deadline Dec. 13. Contact The Chairman, Union of Burma Railway Board, Bogyoke Aung-san St., Rangoon.

● 33500—TURKEY—Supply of 170 kv. underground cables and accessories and pertinent engineering, supervision services. Nominal voltage 154 kv., power frequency 50 hz., normal load 100 mva. per circuit at 150 kv. Financing under CRD loan # 763-TU. TEK Order No. 103-ST/124 and file # 611/TS.KA.AKS. Bid deadline Dec. 22. Contact Turkish Electricity (Tek-Turkiye Elektri Kurumu Genel Mudurlugu, Sebekeler Dairesi Baskanligi), Necatibey Caddesi 3, Sihhiye, Ankara.

33560—PAKISTAN—Lead. Multi Traders (importer, dist., agent), P.O. Box 1351, 22 McLeod Rd., Lahore. WTD 10/71.

Nonferrous foundries

33690 — SWITZERLAND — Precision casted cable junction and connecting boxes, cable bearers, stubs; similar casted accessories for heavy-duty transport cables. Firma Wyssen, Attn: Mr. Wyssen, Pres. (mfr., agent), 3713 Reichenbach. WTD 10/71.

Primary metal industries

33996—URUGUAY—Heat treating units for steel, razor blade tempering, automatic temperature control systems, related equipment. Fabril Internacional S.A. (mfr.), Av. Larrañaga 3426, Montevideo. WTD in prep.

Fabricated metal products

34943—AUSTRIA — Two-way valves, brass or steel, ⅜, ½, ¾ and 1"; requirement about 10,000 pieces annually. Afriso-Euro-Index (importer, dist., mfr.), Maria-Theresien-Strasse 8, A-6890 Lustenau, Vorarlberg. WTD in prep.

Engines, turbines

35192—SWITZERLAND — Air cooled Diesel engines 40-200 hp. Firma Wyssen, Attn: Mr. Wyssen, Pres. (mfr., agent), 3713 Reichenbach. WTD 10/71.

Farm machinery

35228—CZECHOSLOVAKIA—Most modern equipment for establishment of mass-production pig farm (20,000 pig capacity), for mixing, processing feed grains

(milling, storage, etc.); transport of feed by worm conveyors, pumps (hot mixture at 80-90°C.); breeding. Information requested on new developments, research in fermentation of feeds. VEPA (agricultural cooperative), Ing. Josef Krizan, Moravany u Brna.

Construction, mining, materials handling machinery, equipment

● **35300—AUSTRALIA**—Design, manufacture and installation of an asphalt mixing plant of 15,000 lb. batch capacity. Bid No. P11666; bid deadline Jan. 11. Department of Main Roads, New South Wales, 309 Castlereagh St., Sydney, N.S.W. 2000. Specifications available on a short term loan basis to firms domiciled in the U.S. from the General Industries Division, BDC-772, U.S. Department of Commerce, Washington, D.C. 20230. ★(202-967-4319).

● **35300—KOREA**—Carrier for impact hammer, air compressor, apron feeder, jaw crusher, cone crusher and grinding mill. Tender No. KDB-KFW-08; bid deadline Dec. 13. Foreign Loan Dept., the Korea Development Bank, C.P.O. Box 28, Seoul. Tender documents available on a short term loan basis to firms domiciled in the U.S. from the General Industries Div., BDC-772, U.S. Dept. of Commerce, Washington, D.C. 20230. ★(202-967-4317).

● **35300—U.A.R. (Egypt)** — Ten hydraulic backhoe machines with ¾ cubic meter bucket plus five years spare parts. Bid deadline Jan. 20. Specifications available on a short term loan basis to firms domiciled in the U.S. from the General Industries Div., BDC-772, U.S. Dept. of Commerce, Washington, D.C. 20230. ★(202-967-4319).

35351—ISRAEL — Pneumatic conveyor (tube) systems for conveying documents. TEMPO-Combined Enterprises Yerucham-LTD. (importer, dist., mfr.), Industrial Zone, Azur/Holon. WTD in prep.

Metalworking equipment

● **35400—BURMA**—1360 H.S.S. twist drills, various sizes. Tender No. MEIC/B.R./13(T)31(ML-MC)71-72, bid deadline Dec. 13. The Chairman, Union of Burma Railway Board, Bogyoke Aungsan St., Rangoon. Copies of specification are available from Metalworking Equipment Program, BDC-774, Room 5890, U.S. Department of Commerce, Washington, D.C. 20230 ★(202-967-5652).

35410 — GERMANY — Machine for straightening, polishing following types of rods: low and high alloy steel rounds, 60 to 100 millimeters in diameter and 2.3 to 6 meters in length. Edelstahlwerk Witten AG (dist., mfr.), 5810 Witten, Postfach 1369. WTD in prep.

35410—VIET-NAM—Sand sifter, sand mill, sand blender, shot turnblast, foundry shop, machining shop (arm machining and bed machining equipment) painting shop, assembling shop for household sewing machine manufacturing company. Specifications available from International Business Opportunities Staff, BDC-584, Rm. 3515, U.S. Dept. of Commerce, Washington, D.C., 20230. My Nam Cong Ty (MYNACY) (importer, agent), 38 Tong Doc Phuong, Saigon. WTD in prep.

35419—UGANDA—Machinery for production of wood screws capable of producing minimum of 80,000 screws of varying sizes per mo. Armostahl A.G. (importer, mfr.), P.O. Box 3575, Kampala. WTD 10/71.

35421—SAUDI ARABIA — Complete metal forming machinery for medium-sized factory of truck cargo bodies, tippers, water and fuel tanks and stake bodies of minimum capacity of 3000 units per yr. Requests prices c&f Jidda, illustrated brochures. Specifications available from International Business Opportunities Staff, BDC-584, Rm. 3515, U.S. Dept. of Commerce, Washington, D.C., 20230. El Fayafy Trading Corp. (importer, mfr.), P.O. Box 2528, Riyadh. Cable Address: FAYAFY-RIYADH. WTD in prep.

Special Action

Each of the following trade notices is deemed to rate the special attention of American manufacturers and suppliers by the U.S. Commercial Officers overseas.

33121—URUGUAY — Bituminous mineral coal, 12,000 to 14,000 m.t. BTU/lb. 14,000 up to two ins. in size, sulphur content 1%, humidity at time of delivery 2% ash content 3.5% for pipe gas production. Repcom Ltda. (importer, agent), Casilla de Correo 5027 Suc. 1, Montevideo. WTD in prep.

35641—KOREA—One blower for furnace, volume—250 to 350 NM³/min.; pressure—60 to 70 MM/HG. Requests catalogs, f.o.b. and c.&f./Pusan quotations. Korea Mining & Smelting (Hankuk Kwangop Cheryon) Co., Ltd. Attn: Mr. Lee, Chong Woo, Planning Sect. (importer, mfr., exporter), 152 Kwansu-dong, Chongro-ku, Seoul. WTD in prep.

35892—NETHERLANDS — Complete water purification installations. Direct purchase or agency. Englebert N.V., Attn: Mr. Geurts (importer, dist., agent), Englebert N.V., P.O. Box 20, Voorschoten. WTD in prep.

35482—BRAZIL—Portable, pneumatic, reciprocating sanders; Portable, pneumatic cutters for plastic foam sheets; weighing less than 4 lbs. in each case. MACCO Máquinas e Acessórios Ltda. (importer, dist.), Rua Nestor Pestana 125, 7º andar, São Paulo, SP. WTD 9/71.

Special industry machinery

35512—ISRAEL—Complete plant for processing turkeys, to include Kosher slaughtering/scalding, picking, eviscerating, chilling, etc. Capacity: 200 birds per hr.; weight per bird: 26 lbs. Catalogs/specifications, detailed handling instructions to be airmailed soonest. Hevra Lepituah Beit Shean Ltd.* (food/poultry processors; citrus packers, exporters food produce), Mobile Post Beit Shean. Att: Arie Masad, Tech. Mgr. WTD in prep.

35512—JAMAICA—Machinery to dice frozen boneless meat in 1½" cubes; capability: 2,000 lbs. weight per hr.; specifications: 50 cycles, 220 volt. Jamaica Frozen Foods Ltd.; Attn: E. S. Franklin (importer, mfr.), P.O. Box 62, Kingston 13. WTD 2/71.

35513—ISRAEL — Poultry by-product plant for utilization of offal, heads, blood, bone-parts, feathers, etc. for meat-meal production in sacks, bulk form. Capacity: to handle six tons of raw material per day. Hevra Lepituah Beit Shean Ltd. (food/poultry processors; citrus packers; exporters agric. produce) Mobile Post Beit Shean. Att: Arie Masad, Tech. Mgr. WTD in prep.

35513—PHILIPPINES — Complete canning machinery for sardines, one unit with capacity of 1,000 cases (48 14-oz. cans per case) per day (10 to 12 hrs. of operation). Valerio Chua, Pres., Nationwide Films Inc. (importer, dist., exporter), Gala Theater Bldg., 706 Evangelista St., Manila. WTD in prep.

35513—PHILIPPINES — Dehydrating equipment for vegetables, one unit; capacity, 1 ton per cycle, with own generator. R. Martinez & Sons, Attn: Roberto Martinez, Jr., Gen. Mgr. (publishers), 3 Espana corner Mayon, Quezon City. WTD in prep.

35522—SWITZERLAND—Textile industry machinery parts, attachments, accessories, mainly for weaving, spinning mills. Boppart & Co. AG (dist., mfr.), Rietbergstr. 49, 9403 Goldach. WTD 10/71.

35590—ALGERIA—Machine capable of producing 200 tons per yr. carbonic gas to be used in production of soft drinks. Correspondence requested in French. Hamond Boualem Co. (importer, mfr.), 201 rue Hassiba-Ben-Bouali Alger. WTD 10/71.

35594—INDIA — Machinery, equipment for manufacture of scooter tires, tubes; capacity 150,000 pcs. per annum. Specifications available from International Business Opportunities Staff, BDC-584, Rm. 3515, U.S. Dept. of Commerce, Washington, D.C., 20230. Fort Gloster Industries Ltd. (Tyre Div.) (mfr.), P.O. Fort Gloster, Howrah, Railway Station: Bauria (S.E. Rly). WTD 1/71.

35594—TAIWAN—Machinery for making extension and appliance electrical cords for television, radio, tape recorders, lamps. Fu Mei Co., Ltd. (importer, dist., agent), 29 Yenping Rd. North, Sec. 2, Taipei. WTD in prep.

35595—PORTUGAL — Automatic paper tape moisteners, dispensers capable of delivering 70 mm wide tapes in three pre selected lengths. Têxtil Manuel Gonçalves, S.A.R.L. (mfr.), S. Cosme do Vale, V.N. de Famalicão. WTD in prep.

35595—TAIWAN—Machinery for making solderless terminals for cars, electrical appliances. Fu Mei Co., Ltd. (importer, dist., agent), 29 Yenping Rd. North, Sec. 2, Taipei. WTD in prep.

35595—TURKEY—Automatic or semi-automatic machinery to manufacture steel alloy capsules used by dentists for covering teeth as substitute for gold. Capacity anticipated 5 million pieces per yr. on multi shift basis. Requests technical literature, quotations, delivery time, c.i.f. Iskenderun, Turkey. United Nations Industrial Development Organization Small Industries Development Program, P.O. Box 161, Gaziantep.

General industrial machinery

● **35600—BURMA** — Portable conveyor 50 foot length by 1½ foot width driven by about 5 HP electric motor, portable con-

veyor 60 foot length by 2 foot width driven by electric motor for loading coal, air compressor 200 cfm, and battery charger. Tender No. 123/12; bid deadline December 10, 1971. Director-General, Mineral Development Corporation, Rangoon. Specifications available on a short term loan basis to firms domiciled in the U.S. from the General Industries Division, BDC-772, U.S. Department of Commerce, Washington, D.C. 20230. ★(202-967-4317).

● **35600—BURMA**—10″/8″ gravel pumping set complete with prime mover, spares, and centrifugal pump for the mining of tin and tungsten. Tender No. 121/12; bid deadline Dec. 10. Director-General, Mineral Development Corporation, Rangoon. Specifications available on short term loan basis to firms domiciled in the U.S. from the General Industries Division, BDC-772, U.S. Department of Commerce, Washington, D.C., 20230. ★(202-967-4317)

● **35600—INDIA**—One carbon dioxide gas three-stage compressor; horizontal, cross head type, 2,500 p.s.i. and capacity 48 c.f.m. complete with 440 volt, three-phase slip ring motor and starter. No tender number or bid deadline specified. General Manager, Ratlam Alcohol Plant, the Madhya Pradesh State Industries Corp Ltd., Ratlam, Madhya Pradesh.

● **35600—TAIWAN**—Circulating water pumps and condensate pumps to be installed with a 500 mw. thermal generating unit at Talin Power Station, Kaohsiung. Proposals will be considered only from suppliers who have designed, built and placed in satisfactory operation for more than one year at the time of proposal: (a) at least three units of vertical, directly coupled motor driven, mixed flow type circulating water pump of approximately 120,000 g.p.m. capacity and 20 ft. total head; and (b) at least three units of vertical, directly coupled motor driven, can type condensate pump of approximately 3,000 g.p.m. capacity and 500 ft. total head. Tender number and bid deadline not specified. Gibbs and Hill Inc., 393 Seventh Ave., New York, N.Y. 10001.

35614 — KOREA — One compressor for furnace, volume—90 to 130 nm/min; pressure—0.8 to 1.2 kg/cm.^{2} Requests catalogs, f.o.b. and c&f/Pusan quotations. Korea Mining & Smelting (Hankuk Kwangop Cheryon) Co., Ltd. Attn: Mr. Lee, Chang Woo, Planning Section (importer, mfr., exporter), 152 Kwansu-dong, Chongro-ku, Seoul. WTD in prep.

35642—FRANCE — Purification equipment for air, gases. Direct purchase & agency. Compagnie Industrielle de Filtration et d'Equipement Chimique, CIFEC (importer, dist., mfr.), 18 rue d'Armenonville, 92-Neuilly. WTD 9/71.

35690 — ISRAEL — Machinery, related equipment for production of plastic material (bubble-wrappers) for packaging delicate items. Omega Ltd.-Dry Cleaning Works (importer, laundry-dry-cleaning services), 26 Rav Kook St., Petah-Tiqva. WTD in prep.

35690 — ISRAEL — Hydraulic jacks for general industrial use, including maintenance of cars. Shahar Ltd. (importer, retailer, repair shops), 35 Bar Kochba St., Petah-Tiqva. WTD 9/71.

35690—ITALY—Water-purifying apparatus, equipment. Roberto Venco (importer, agent, engineering), Via Pinelli 23, 10144 Torino. WTD 11/71.

Office, computing, accounting machines

35731 — CZECHOSLOVAKIA — Electronic data processing computer, peripheral equipment; including tape transport system. Hutni odbyt (coordination office) Ing. Josef Schovanek, Chief of Computing Center, Havlickova 11, Prague 1.

35791 — TAIWAN — Automatic electrostatic copying machine—electrofax system (wet or dry), desk-top or stand type, for copying books, sheets and 3-dimensional objects, copy sizes B5 (10.1″ x 7.2″) —A3 (16.5″ x 11.7″) above, speed 6-10 copies/minute, copy magnification 1:1 & 1:0.7 & 1:0.5 etc., copy counter 1 to 10 copies or continuous copying, paper feeding sheet-fed or roll cut, power source 110V AC 50/60 C/S. Lien Ming Co., Ltd. (importer, exporter), 1-3 Tien Shui Rd., Taipei 101. WTD in prep.

Special Action

The Commerce Department had a Business Development Office at the 1971 Fall Engineering Fair at Brno, Czechoslovakia. The following trade opportunities were developed:

38430—CZECHOSLOVAKIA — (1) Equipment for stomatological surgery, including accessories for X-ray, sterilization, Ultrasonic filters. (2) Laboratory equipment for both chrome-cobalt and porcelain methods of tooth repair. Trimmers, casting machines, electric furnaces, etc. (3) Equipment for dental chemistry. First Stomatological Clinic, Doc. Dr. Vladimir Sicha, chief stomatologist, First Stomatological Clinic, Brno Medical Faculty, Silingerovo namesti 2, Brno, Czechoslovakia.

35552 — CZECHOSLOVAKIA — Photo-offset printing press for booklets, catalogs, posters, and similar items. Orlican-Chocen (manufacturer of refrigerating containers and medium-sized vans and sports aircraft). Vladimir Vich and Bohumil Pavlu, Orlican Chocen, Chocen, Czechoslovakia.

36112 — CZECHOSLOVAKIA — Electric measuring and test instruments for the production of the insulating parts of transformers. SKODA, large producer of heavy-engineering products (mfr.), Ing. Stanislav Spurny, chief of Technology Dept., SKODA, ET Doudlevce, Pilsen, Czechoslovakia.

38213—CZECHOSLOVAKIA — Instruments and equipment for testing (hydrostatic, low-pressure, pressure-retention, compression, vibration) of various types of packaging: *Testing machines:* rotating drum, vibration table, inclined impact machine, compression machine. *Measuring equipment:* accelerometer (on electronic principle), dynamometer (with recorder), apparatus for measuring transportation hazards ('g' factor). Institute for Materials Handling, Transportation, Packaging and Storage Systems (IMADOS), Ing. Frantisek Wretzel and Ing. Ivan Havel, IMADOS, U Michelskeho lesa 366, Prague 4-Krc, Czechoslovakia.

More details on these trade opportunities are available from your nearest Commerce Field Office. (See inside back cover for address.)

Service industry machines

35820 — ISRAEL — Commercial laundry plants; complete, to be installed in hospitals (abt. 500 beds), schools and big enterprises to handle laundry (sheets, towels, uniforms, etc.) of between 3-400 Kgs. Equipment to include washers, dryers, ironers, folders-combinations/others. Gaza Contracting Co. Ltd. (importer, contracting/servicing), P.O. Box 1, Gaza, Via Israel. WTD in prep.

35851—AUSTRALIA — Air conditioning system for new building of 11,000 sq. ft. floor/space. Len Beioley, Gen. Mgr., Radio 4KQ Labor House, Edward St., Brisbane, 4000. WTD in prep.

35851 — KOREA — Ice making machines capable of making enough ice to supply city of 300,000 population all year around; complete unit of refrigeration equipment and accessories to equip cold storage of 7,200 sq ft. Requests catalogs, f.o.b. and c&f/Pusan quotations. Mr. Yang Pong Sok, Pres., Daerim Yontan Co., Ltd. (dist., mfr.), 116 Ohryu-dong, So Daejon, Daejon, Chungchong Namdo. WTD in prep.

35852—TOGO — Air-conditioners; room, unitary. Quotations c.i.f. Lome. Agence Togolaise de Représentations Industrielles et Commerciales (ATRIC) (importer, retailer), 7, Ave. de la Libération B.P. 1642, Lome. WTD 10/71.

35853—PHILIPPINES — Quick-freezing equipment, one unit; capacity, 1 ton, for fish, other sea products, self-contained. R. Martinez & Sons, Attn: Roberto Martinez, Jr., Gen. Mgr. (publishers), 3 Espana corner Mayon, Quezon City. WTD in prep.

35892 — FRANCE — Water treatment equipment, including filtration, softening, purification systems. Direct purchase & agency. Compagnie Industrielle de Filtration et d'Equipement Chimique, CIFEC (importer, dist., mfr.), 18 rue d'Armenonville, 92-Neuilly. WTD 9/71.

35892—GERMANY—Water conditioners, water softening units, demineralizers and automatic controls for these units. Price quotation c.i.f. European ports. Deutsche Ton- und Steinzeugwerke AG. (importer, dist., mfr.), 3500 Kassel-Bettenhausen, Leipziger Str. 156. WTD 12/70.

Electric transmission equipment

● **36100 — PAKISTAN** — Supply transformers, 2x500 KVA and 2x1,000 KVA; distribution switchboard, main H.V. switchboard and H.V. distribution switchboard, and busbar trankings, 2x800 Amp and 2x1,600 Amp.; receival and mill main MV switchboards; four capacitor control switchboards; sixteen 50-KVAr capacitor units and mounting frames; two tripping battery and x charger units; HV cable and cable boxes; HV cable and glands; earthing electrodes and copper strip; lighting arrestors and associated earthing system; testing equipment. Tender documents available, at $100 per set, from M. A. Basith, Coordinator Projects, Pakistan National Oils Ltd., Karim Chamers, 4th floor, Merewether Road, Karachi. There is currently no tender number or deadline.

Equipment suppliers must be firms located in member countries of the Asian Development Bank.

36112—CANADA—Power meters, VSWR indicators, Wheatstone bridges, vacuum tube voltmeters, digital multimeters, signal generators, portable oscilloscopes. Direct purchase or agency. Inter-Maritime Comco Ltd., Attn: George Hemming, V.P. (dist., agent, retailer), P.O. Box 405, Ste. Therese, Quebec. WTD in prep.

36113—SWITZERLAND — Cermet and wire wound potentiometers. Elbatex AG (importer, dist., agent), Alb. Zwyssigstrasse 28, 5430 Wettingen. WTD 10/71.

Electrical industrial apparatus

●**36200—BURMA**—500,000 feet of welding electrodes, various sizes and grades. Tender No. MEIC/BR/13(T)43(MC.ML.EW) 71-72, bid deadline Dec. 20. The Chairman, Union of Burma Railway Board, Bogyoke Aungsan St., Rangoon. Copies of specifications are available from Metalworking Equipment Program, BDC-774, Room 5890, U.S. Department of Commerce, Washington, D.C. 20230. ★(202-967-5652).

36211—PORTUGAL—Electric motors for use with submersible water pumps at voltages between 1 and 50 Kv. for placement in 4, 6, 8, 10 in. holes. PRECISAL-Equipamentos de Precisão, Lda. (importer, agent), Largo do Conde Barão 34-2º Esq., P.O. Box 2757, Lisbon. WTD in prep.

36220—SWITZERLAND — Power resistors. Elbatex AG (importer, dist., agent), Alb. Zwyssigstrasse 28, 5430 Wettingen. WTD 10/71.

Radio, television receiving sets

36520—LIBYA—Recording tapes for cassette type tape recorders. Mohammed B. Labaied (importer, agent, exporter), Shara Basciar #25, P.O. Box 859, Tripoli. WTD in prep.

Communication equipment

36622—ITALY—Marine radiotelephones for pleasure boats. Barracuda Sport (importer, agent, retailer), Via Flavia 3/A, 00187 Rome. WTD 2/71.

36622—PORTUGAL — Color television broadcast equipment; closed circuit systems. SONOTICA-Sociedade de Equipamentos Audio Visuais, Lda. (importer, agent), Rua Pascoal de Melo 79-1º, Lisbon 1. WTD in prep.

36623—CANADA—Signal alarm equipment to be used with mobile communications. Direct purchase or agency. Inter-Maritime Comco Ltd., Attn: George Hemming, V.P. (dist., agent, retailer), P.O. Box 405, Ste. Therese, Quebec. WTD in prep.

36625—ITALY—Cable type fish finders for sport fishermen (small portable water temperature and depth indicators). Barracuda Sport (importer, agent, retailer), Via Flavia 3/A, 00187 Rome. WTD 2/71.

36626—CANADA—Telemetering equipment to be used in conjunction with radio communications equipment. Direct purchase or agency. Inter-Maritime Comco Ltd., Attn: George Hemming, V.P. (dist., agent, retailer), P.O. Box 405, Ste. Therese, Quebec. WTD in prep.

36629—CANADA—UHF FM mobile radio telephones, base stations; speech scrambling devices for use with mobile telephones, pocket paging systems AM and FM). Direct purchase or agency. Inter-Maritime Comco Ltd., Attn: George Hemming, V.P. (dist., agent, retailer), P.O. Box 405, Ste. Therese, Quebec. WTD in prep.

Electronic components, accessories

36720—ITALY—Television picture tubes. Regis (importer, dist., mfr.), Via Tripoli 45, 13051 Biella (Vercelli). WTD 2/71.

36740—ITALY — Semiconductor diodes. Regis (importer, dist., mfr.), Via Tripoli 45, 13051 Biella (Vercelli). WTD 2/71.

36740—SWITZERLAND — Photoelectric cells, other opto-electronic elements. Elbatex AG (importer, dist., agent), Alb. Zwyssigstr. 28, 5430 Wettingen. WTD 10/71.

36741—SWITZERLAND—Integrated circuits. Elbatex AG (importer, dist., agent), Alb. Zwyssigstr. 28, 5430 Wettingen. WTD 10/71.

36742—SWITZERLAND — Transistors. Elbatex AG (importer, dist., agent), Alb. Zwyssigstr. 28, 5430 Wettingen. WTD 10/71.

36743—SWITZERLAND — Semiconductors, triacs, thyristors, rectifiers. Elbatex AG (importer, dist., agent), Alb. Zwyssigstrasse 28, 5430 Wettingen. WTD 10/71.

36793 — SWITZERLAND — Variable resistors. Elbatex AG (importer, dist., agent), Alb. Zwyssigstr. 28, 5430 Wettingen. WTD 10/71.

36795—SWITZERLAND — Reed relays. Elbatex AG (importer, dist., agent), Alb. Zwyssigstr. 28, 5430 Wettingen. WTD 10/71.

Motor vehicles, equipment

37141—NETHERLANDS — Automotive spare parts. Exclusive representations for Benelux countries. N.V. Handelmaatschappij "SARVI," Attn: L. J. Berenbroek (importer, agent), 1 Wijde Begijnestraat, Utrecht. WTD 10/71.

37141 — PORTUGAL — Motor vehicle parts, accessories (adaptable to Volkswagen, other European vehicles). Sociedade Comercial Guerin, SARL., Central Dept. of Parts & Accessories (importer, agent), Damaia, Buraca, Amadora. WTD 11/70.

Railroad cars

● **37400—SPAIN**—Rednacional de Ferrocarriles Espanoles (RENFE) wishes to purchase 450 "ore" type flat cars for the transportation of steel products. General and technical conditions and drawings may be obtained from RENFE, Direccion de Compras, Plaza de Los Sagrados Corazones, 7, Madrid (16) Spain. Correspondence preferred in Spanish. Tender No. BIRF #45, Bid Deadline Dec. 20. Documents are available for review only in the Transportation Equipment Div., BDC, Room 5093, Main Commerce Bldg., Washington, D.C. 20230 ★(202-967-4816).

Motorcycles, bicycles, parts

37510—GERMANY—Accessories, to include high performance tuning kits, for all makes of motorcycles. Prices c.i.f. German or European ports. Eysel Motor Sport (importer, dist., retailer), 3 Gelnhauser Str., 6456 Langenselbold. WTD 12/70.

Engineering, laboratory, scientific, research instruments

38111—ITALY—Navigation instruments, including speedometers, tachometers, automatic pilots for pleasure boats. Barracuda Sport (importer, agent, retailer), Via Flavia 3/A, 00187 Rome. WTD 2/71.

38112—ITALY—Chemical laboratory, research, scientific instruments. Dr. Mario De La Pierre di Pietro De La Pierre (importer, dist., agent), Via dei Mille 16, 10123 Torino. WTD 2/71.

Instruments for measuring, indicating, indicating physical characteristics

● **38200 — BURMA** — Supply of engine testing stand, injection pump tester; nozzle tester; and battery cell tester. Tender No. 8026-1 (T) MCY/RTB (71-72), bid deadline Dec. 31. Invited by the Chairman, Road Transport Board, No. 375 Bogyoke Aung San St., Rangoon, Burma. Terms and specifications available on short term loan basis from the Business, Photographic, and Scientific Equipment Division, BDC-708, U.S. Department of Commerce, Washington, D.C. 20230. ★(202-967-2939)

Optical instruments, lenses

38311—ITALY—Binoculars for hunting purposes, tripods therefor. Guglielmo Demarchi & C. (importer, dist., agent), Via Gobetti 11, 10123 Torino. WTD 4/71.

Surgical, medical, dental instruments

38410—MEXICO—Stainless steel atraumatic surgical suture eyeless needles, of type used by catgut, suture manufacturers. c/o. Ciro A. Valdés, CIFRA Corporacion Comercial, S. de R.L. (importer, dist., mfr.), Calle 425-A, Colonia Libertad, Monterrey, N.L. WTD in prep.

Photographic equipment

38610—SPAIN—Machines for placing emulsified magnetic bands to motion pictures of any format. Correspondence requested in Spanish/French. Laboratorio de Aplicaciones Cinematográficas, S.A. (CINESA) (mfr.), Azcona, 36, Madrid (2). WTD 11/71.

Toys, amusement, sporting goods

39490—SINGAPORE—Sporting, athletic goods. Michael Chee Teck Seng, Sole Proprietor, Spotcraft (importer, retailer), Liat Towers, 541 Orchard Rd., Singapore 9. WTD 9/71.

39493—JAPAN—Bowling balls, shoes, ball bags, other bowling supplies, accessories. Nippon Kigyo Trading Corp. (importer, exporter), Higashi P.O. Box No. 168, Nagoya. WTD 9/71.

Costume jewelry, novelties, notions

39610—ISRAEL — Imitation gemstones (rubies, pearls, tiger-eyes, etc.) of glass for costume jewelry, novelties. The Wahrhaft Co. Ltd. (importer, dist., mfr.), P.O. Box 3141, Ramat-Gan. WTD in prep.

Manufacturing industries

39913—FRANCE — Toothbrushes with incorporated toothpaste. S.N.C. Papone (importer, mfr.), 45, ave. Pasteur, 06-Antibes. WTD in prep.

Wholesalers

50930—TAIWAN—Iron and steel scrap—cold and hot rolled mild steel sheet seconds cut from coil ends, unassorted sizes and gauge; old armor steel plate in random sizes. Li Chong Co., Ltd. (importer, exporter), 3rd Fl., 30 Chungshan North Rd., Sec. 2, Taipei 104. WTD in prep.

Business services

73920—NETHERLANDS — Computer software packages, preferably IBM compatible, such as programming support programs, management support programs, total management information systems. Sales in Netherlands or Benelux countries. RAET, Attn: Drs. J. M. Albers (importer, automation advisers), Sickeszplein 1, Arnhem. WTD in prep.

73920—NETHERLANDS—All kinds of computer software. Holland Dataplan; Attn: J. N. Vles (dist., information processing engineers), Nieuwe Zijds Voorburgwal 120-126, Amsterdam. WTD in prep.

73920 — NETHERLANDS — Software packages, bookkeeping and service programs. Mr. C. van de Velden (business management consultants), Gildemeesterstraat 298, Arnhem. WTD in prep.

73920 — NETHERLANDS — Software packages for non-industrial applications such as for utilities, language, pre-processors, telecommunications and monitors. Sales in Benelux countries, Scandinavia, W. Germany. Desisco Nederland N.V., Attn: R. A. Simoons (importer, dist., information systems consultants), Herengracht 414, Amsterdam. WTD in prep.

Bidders Can Prequalify For Ecuador Hydroelectric Project

The Bids Committee of Ecuador's Ministry of Natural Resources and Tourism and the Ecuadorean Electrification Institute (INECEL), Quito, have announced an international invitation to bid on the **Pisayambo Hydroelectrical Project**, on the basis of unit prices for: a) construction of plant projects and dam and internal transportation facilities; b) assembly of pressure pipes, dam drainage pipes, valves, sluices, and generating plant equipment; and c) construction of municipal projects and assembly of the lifting substation at Pucara.

The construction firms, or groups of firms, desiring to participate in the bidding must be established in member countries of the Inter-American Development Bank (a loan from the IDB is being processed for projects covered by this tender), and shall comply with prequalification requirements set forth in "Advance Notice of Invitation to Bid," and "Instructions to Bidders." For purposes of prequalification interested parties must submit evidence of their financial strength, technical qualifications, and good reputation. Prequalification requirements, instructions to bidders, specifications and other documents, may be obtained from: Secretaria General de INECEL, Avenida 10 de Agosto 817 y Riofrio, Quito, upon payment of 10,000 sucres (400), nonreimbursable.

Prequalification documentation shall be filed not later than Dec. 3. The decisions taken by INECEL are to be released on or before Jan. 2. Then, prequalified firms may submit their bids to the Secretaria Secretario del Comite de Licitaciones, Oficina 206, Ministerio de Recursos Naturales y Turismo, Calle Santa Prisca y Manuel Larrea, Quito. Bid deadline is Feb. 16.

The Bids Committee reserves the right to declare this invitation invalid if the bids submitted do not serve the best interests of Ecuador.

Agencies

Specific foreign firms have expressed interest in agency agreements for the products listed below. Exclusive agencies for these products are wanted only if specified.

Field crop farms

01130—SPAIN—Dry beans, dry peas, other pulses. Correspondence requested in Spanish/French. Hijos de Ignacio Polo García, S.A. (agent), Apartado #10, Tarancón, Cuenca. WTD 10/71.

Fruit, tree nut, vegetable farms

01230 — DOMINICA — Potatoes, onions. Requests replies from producers. Marie Dechaussey (dist., agent, retailer), 25 Kennedy Ave., Roseau. WTD in prep.

Miscellantous nonmetallic minerals, except fuels

14990—GERMANY—Chrysotile asbestos (all kinds and grades) Carl E. Brandes (Mr. E. von Badewitz) (importer, dist., mfr.), 3000 Hannover, Walderseestrasse 4. WTD in prep.

Meat products

20111—TAIWAN—Beef essence. Oshiu Trading Co., Ltd. (importer, agent, exporter), 20, Lane 76, Lung Chiang St., Taipei 104. WTD in prep.

20118 — NETHERLANDS — Canned meats. Boas N.V. (importer, dist., agent), P.O. Box 1316, The Hague. WTD 8/71.

20118 — SWITZERLAND — Canned meats: beef, ham, veal. Boppart & Co. AG (dist., mfr.), Rietbergstr. 49, 9403 Goldach. WTD 10/71.

20137—HONDURAS—All types of sausages, including vienna type sausages, canned. Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

20138—HONDURAS—Canned meats, all types. Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

Dairy products

20210 — TAIWAN — Creamery butter. Oshiu Trading Co., Ltd. (importer, agent, exporter), 20, Lane 76, Lung Chiang St., Taipei 104. WTD in prep.

20220—DOMINICA—Cheese. Marie Dechaussey (importer, dist., agent), 25 Kennedy Ave., Roseau. WTD in prep.

20232—HONG KONG—Evaporated milk. Globe Trading Co., Ltd. (importer, dist., agent), 2nd Fl., United Chinese Bank Bldg., 31-37 Des Voeux Rd. Central. WTD 12/70.

20232—TAIWAN—Canned milk. Oshiu Trading Co., Ltd. (importer, agent, exporter), 20, Lane 76, Lung Chiang St., Taipei 104. WTD in prep.

20260—DOMINICA—Milk. Marie Dechaussey (importer, dist., agent), 25 Kennedy Ave., Roseau. WTD in prep.

Canning, preserving foods

20310—DOMINICA—Cod fish. Marie Dechaussey (importer, dist., agent), 25 Kennedy Ave., Roseau. WTD in prep.

20310—HONDURAS — Canned salmon, sardines; all sizes of cans, tins. Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

20321—TAIWAN—Canned baby food. Oshiu Trading Co., Ltd. (importer, agent, exporter), 20, Lane 76, Lung Chiang St., Taipei 104. WTD in prep.

20324—NETHERLANDS — Canned specialties. Boas N.V. (importer, dist., agent), P.O. Box 1316, The Hague. WTD 8/71.

20330—DOMINICA — Wide variety of canned vegetables. Marie Dechaussey (importer, dist., agent), 25 Kennedy Ave., Roseau. WTD in prep.

20331 — HONDURAS — All kinds of canned fruits. Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

20331—HONG KONG — Canned fruit. Globe Trading Co., Ltd. (importer, dist., agent), 2nd Fl., United Chinese Bank Bldg., 31-37 Des Voeux Rd. Central. WTD 12/70.

20331 — NETHERLANDS — Canned fruits. Boas N.V. (importer, dist., agent), P.O. Box 1316, The Hague. WTD 8/71.

20332—NETHERLANDS—Canned vegetables. Boas N.V. (importer, dist., agent), P.O. Box 1316, The Hague. WTD 8/71.

20352 — HONDURAS — Pickles, olives, capers; canned or bottled. Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

20354 — HONDURAS — Bottled sauces, mustard, mayonnaise, all size bottles. Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

Bakery products

20521—HONDURAS—Cookies, crackers, in boxes, tins; all types. Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

Confectionery

20722—HONG KONG — Confectionery, especially chocolate. Globe Trading Co., Ltd. (importer, dist., agent), 2nd Fl., United Chinese Bank Bldg., 31-37 Des Voeux Rd. Central. WTD 12/70.

Food preparations

20998 — TAIWAN — Powdered cocoa. Oshiu Trading Co., Ltd. (importer, agent, exporter), 20, Lane 76, Lung Chiang St., Taipei 104. WTD in prep.

Cigarettes

21110—ENGLAND — Tobacco manufactures (cigarettes, cigars, pipe tobacco, snuff). Sullivan Powell & Co. Ltd. (part of Sobranie (Holdings) Ltd.) (importer, dist., mfr.), 2 Chichester Rd., London, N9 9DJ. WTD in prep.

Broad woven fabric mills, cotton

22111 — HONDURAS — Cotton denims, 13¾ oz. wt.; acetate and polyester

bonded fabrics; all types of polyester, cotton shirtings. Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

22117—SOUTH AFRICA—Fabrics: cotton, novelty for women's dresses, men's suitings, children's wear. Requests prices c.i.f. main South African ports including 7% commission, attractive 12×16″ feeler samples, mounted color patts, full description with article number. Invoices must indicate widths in mms or cms; weight per sq. meter; count of threads per sq. mm; composition; percentages in mixtures. Mill Agents (S.A.) (Pty.) Ltd. (agent), 122/130 Boston House, Strand St., P.O. Box 3161, Cape Town, Cape Province. WTD 10/71.

22119 — FRANCE — Terry-type towels, washcloths. Halard S.A. (dist., mfr.), 50, rue du Faubourg Saint Honoré, 75-Paris 8e. WTD in prep.

Broad woven fabric mills, manmade fiber, silk

22215—HONDURAS — Polyester/viscose mixed suitings; polyester/cotton mixed suitings; wool/polyester mixed suitings; polyester/cotton lawn and broadcloth (shirtings); interlinings, polyester/cotton; polyester and polyester mixed ladies' fabrics, all types; polyester/cotton check and striped ginghams; polyester and polyester mixed with other fibers, double and single knitted jerseys. Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

22218—AUSTRIA — Upholstery fabrics of all kinds. PIVEC Johann & SCHLOEGL Heinrich (agent), Schuettaustr. 72-78/3/4/17, A-1223 Vienna. WTD 11/71.

22218—SOUTH AFRICA—Fabrics: manmade fiber, silk; novelty for women's dresses, men's suitings, children's wear. Requests prices c.i.f. main South African ports including 7% commission, attractive 12×16″ feeler samples, mounted color patts, full description with article number. Invoices must indicate widths in mms or cms; weight per sq. meter; count of threads per sq. mm; composition; percentages in mixtures. Mill Agents (S.A.) (Pty.) Ltd. (agent), 122/130 Boston House, Strand St., P.O. Box 3161, Cape Town, Cape Province. WTD 10/71.

Broad woven fabric mills, wool

22313 — SOUTH AFRICA — Fabrics of wool, mohair, similar fibers; novelty for women's dresses, men's suitings, children's wear. Requests prices c.i.f. main South African ports including 7% commission, attractive 12×16″ feeler samples, mounted color patts, full description with article number. Invoices must indicate widths in mms or cms; weight per sq. meter; count of threads per sq. mm; composition; percentage in mixtures. Mill Agents (S.A.) (Pty.) Ltd. (agent), 122/130 Boston House, Strand St., P.O. Box 3161, Cape Town, Cape Province. WTD 10/71.

Dyeing, finishing textiles, except wool fabrics, knit goods

22628—AUSTRIA — Curtain materials; manmade fiber materials, fiber glass; velvets. PIVEC Johann & SCHLOEGL Heinrich (agent), Schuettaustr. 72-78/3/4/17, A-1223 Vienna. WTD 11/71.

Floor covering mills, products

22790 — AUSTRIA — Textile flooring, wall-to-wall, tiles, needle felt; manmade fiber materials. PIVEC Johann & SCHLOEGL Heinrich (agent), Schuettaustr. 72-78/3/4/17, A-1223 Vienna. WTD 11/71.

Textile goods

22940—ITALY—Non-cellulosic synthetic fibers (mill waste, new). Magheri, Marino (importer, agent), 31 Via S. Giorgio, I 50047 Prato (Florence). WTD 10/71.

Fabricated textile products

23960—ENGLAND—Furnishing fabrics; trimmings for dresses, underwear. Grimmex Ltd. (agent, exporter), 189 Regent St., London, W1R 7WD. WTD in prep.

Paper mills

26211 — HONDURAS — Newsprint, in bobbins, reams (cut). Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

Paperboard mills, products

26315—HONDURAS—All types of cardboard (light and heavy). Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

Converted paper, paperboard products

26440 — IRAN — Wallpaper. Exclusive agency. Izad-Kar Co. Ltd., (importer, agent), P.O. Box 1077, Tehran. WTD 10/71.

26472 — HONDURAS — Sanitary tissue paper, in rolls. Everest Agencies (Elías Guerrero) (importer, dist., agent), Apartado Postal No. 318, Tegucigalpa, D.C. WTD in prep.

Publishing & printing

27215 — SOUTH AFRICA — Paperback magazines of general interest, comics: back numbers only, in mint condition, English language. Requests prices c.i.f. South African port including 5% commission. Mill Agents (S.A.) (Pty.) Ltd. (agent), 122/130 Boston House, Strand St., P.O. Box 3161, Cape Town, Cape Province. WTD 10/71.

Books

27313 — SWITZERLAND — Scientific books, all kinds, except popular scientific literature. Karger Libri Ag, Attn: Peter G. Isler, Dir. (dist., agent, retailer), Arnold Boecklin Strasse 25, 4000 Basel II. WTD 10/71.

General commercial printing

27511—SWITZERLAND — Scientific literature and periodicals, all kinds, except popular magazines. Karger Libri AG, Attn: Peter G. Isler, Dir. (dist., agent, retailer), Arnold Boecklin Strasse 25, 4000 Basel II. WTD 10/71.

Industrial chemicals

28180—CANADA—Chemical specialties. British American Chemical Co. Ltd. (importer, dist., mfr.), 8321 Willard Ave., South Burnaby, B. C. WTD 11/71.

28180—PAKISTAN—Industrial organic chemicals. Zaminos (agent), 106-107 WAPDA House, Shahrah-e-Quaid-e-Azam, Lahore. WTD in prep.

28199—VIET NAM—Industrial chemicals, including dyestuffs, pigment. Quotations c.i.f. Saigon, brochures requested. Thai Binh Duong Cong Ty (PACIFICO) (importer, dist., agent), 147 Trinh Minh The, P.O. Box 876, Saigon. WTD 10/71.

Synthetic materials

28212—THAILAND—Cellophane papers, transparent, colored, size 90×100 cms., 31 grams., in ream of 500 sheets. Requests catalogs, c.i.f. Bangkok prices. Chuang Pong Pun Ltd., Partnership (importer, dist.), 1806/57 Bantadtong Rd., Patumwan, Bangkok. WTD 8/71.

28213 — ITALY — Acrylic resins. V. Antonio Leone & C., S.a.s. (importer, agent), Corso Massimo d'Azeglio 76, 10126 Torino. WTD 2/71.

28214 — GERMANY — Polyester resins, epoxy resins, polyurethane and diisocyanate resins. "TEBU" MBH Minerale Handelsgesellschaft (dist., agent), 75 Adersstrasse, 4 Duesseldorf. WTD 9/71.

28214—ITALY—Polyester and polyurethane resins. V. Antonio Leone & C., S.a.s. (importer, agent), Corso Massimo d'Azeglio 76, 10126 Torino. WTD 2/71.

28215 — CANADA — Adhesive coatings. British American Chemical Co. Ltd. (importer, dist., mfr.), 8321 Willard Ave., South Burnaby, B. C. WTD 11/71.

28215—GERMANY—Epoxy resins, phenolic resins, urea and melamine resins, others, including combinations. "TEBU" MBH Minerale Handelsgesellschaft (dist., agent), 75 Adersstrasse, 4 Duesseldorf. WTD 9/71.

28216—GERMANY—Synthetic resins for protective coatings for use in other types of paint. "TEBU" MBH Minerale Handelsgesellschaft (dist., agent), 75 Adersstrasse, 4 Duesseldorf. WTD 9/71.

28241 — PORTUGAL — Nylon manmade fibers, staple and tow, for use in textile industry. Francisco Roque da Costa Junior & Filhos, Lda. (importer, agent), Apartado 46, Covilhã. WTD in prep.

28242 — PORTUGAL — Polyester and acrylic fibers, staple and tow; other manmade fibers for use in textile industry. Francisco Roque da Costa Junior & Filhos, Lda. (importer, agent), Apartado 46, Covilhã. WTD in prep.

Drugs

28332 — SWITZERLAND — Botanical drugs, bio-cosmetics. Laboratoires F.B. Unis SA, Attn: Maurice Gros, Pres. (dist., mfr., exporter), Chemin des Creuses 9, 1008 Prilly-Lausanne. WTD 11/71.

28345—SWITZERLAND—Dietary pharmaceutical preparations. Laboratoires F.B. Unis SA, Attn: Maurice Gros, Pres. (dist., mfr., exporter), Chemin des Creuses 9, 1008 Prilly-Lausanne. WTD 11/71.

28346—SWITZERLAND — Bio-cosmetic pharmaceutical preparations, skin treatment drugs, creams. Laboratoires F.B. Unis SA, Attn: Maurice Gros, Pres. (dist., mfr., exporter), Chemin des Creuses 9, 1008 Prilly-Lausanne. WTD 11/71.

Soap, detergents, cleaning preparations, perfumes, cosmetics

28414—GERMANY—Glycerine, natural: crude, 100% basis; high-gravity, dynamite, and yellow distilled; 100% basis; chemically pure, 100% basis. "TEBU" MBH Minerale Handelsgesellschaft

(dist., agent), 75 Adersstrasse, 4 Duesseldorf. WTD 9/71.

28416 — CANADA — Industrial detergents. British American Chemical Co. Ltd. (importer, dist., mfr.), 8321 Willard Ave., South Burnaby, B.C. WTD 11/71.

28423 — SWITZERLAND — Novelty household sanitation products, specialty cleaners, disinfectants. Laboratoires F.B. Unis SA, Attn: Maurice Gros, Pres. (dist., mfr., exporter), Chemin des Creuses 9, 1008 Prilly-Lausanne. WTD 11/71.

28424 — SWITZERLAND — Novelty household polishing preparations, all kinds. Laboratoires F.B. Unis SA, Attn: Maurice Gros, Pres. (dist., mfr., exporter), Chemin des Creuses 9, 1008 Prilly-Lausanne. WTD 11/71.

28442—SWITZERLAND—Fancy packed quality toilet waters, perfumes, similar items for sale in drug, department stores. Herba Holding Ag, Attn: Mr. Schoch (dist., mfr.), P.O. Box, 4600 Olten. WTD 7/71.

28445 — SWITZERLAND — Cleansing preparations, cosmetic, bath additives, creams, lipsticks, similar items, preferably in fancy packages for sale in drug, department stores. Herba Holding AG, Attn: Mr. Schoch (dist., mfr.), P.O. Box, 4600 Olten. WTD 7/71.

28445—SWITZERLAND — Novelty biocosmetics, skin treatment toiletries, advanced toilet preparations. Laboratoires F.B. Unis SA, Attn: Maurice Gros, Pres. (dist., mfr., exporter), Chemin des Creuses 9, 1008 Prilly-Lausanne. WTD 11/71.

28445 — SWITZERLAND — Obstetrical, proctological toiletries; sprays. Shiping Versand Widmer (importer, dist., retailer), Lottenweg 760, 5102 Rupperswil. WTD 11/71.

Paints, varnishes, lacquers, enamels

28516—CANADA — Protective coatings for industrial use. British American Chemical Co. Ltd. (importer, dist., mfr.), 8321 Willard Ave., South Burnaby, B. C. WTD 11/71.

28518 — CANADA — Paint strippers. British American Chemical Co. Ltd. (importer, dist., mfr.), 8321 Willard Ave., South Burnaby, B. C. WTD 11/71.

Chemical products

28911—GERMANY—Animal glues; hide (dry form); bone, green and extracted. "TEBU" MBH Minerale Handelsgesellschaft (dist., agent), 75 Adersstrasse, 4 Duesseldorf. WTD 9/71.

28912 — GERMANY — Gelatin, food grade, photographic grade. "TEBU" MBH Minerale Handelsgesellschaft (dist., agent), 75 Adersstrasse, 4 Duesseldorf. WTD 9/71.

28930 — THAILAND — Inks: gravure, printing, lithographic and offset, letterpress. Requests catalogs, c.i.f. Bangkok prices. Koh Guan Thye Ltd. Partnership (importer, dist.), 57 Sam Yek, Rama IV Rd., Bangkok. WTD 12/70.

Fabricated rubber products

30697—SWITZERLAND — Medical rubber supplies, sanitary products, disposable medical rubber sundries, obstetrical, proctological products; prophylactics. Shiping Versand Widmer (importer, dist., retailer), Lottenweg 760, 5102 Rupperswil. WTD 11/71.

Plastic products

30796 — AUSTRIA — Fiberglass reinforced plastic swimming pools, above and underground; fiberglass and acrylic paneling for swimming pools in curved and rigid frames in various configurations; swimming pool slides; diving boards; swimming pool liners, covers and enclosures of plastic materials; other fittings, accessories for swimming pools. Eller Saunabau Ges.m.b.H., Import-Export (importer, dist. (wholesale), agent), Untere Viaduktgasse 47, A-1030 Vienna. WTD in prep.

Pottery, related products

32610—FRANCE—Towel bar holders, vitreous china and earthenware; china and earthenware plumbing fixtures (accessories, fittings); soap dishes, vitreous china and earthenware. Halard S.A. (dist., mfr.), 50, rue du Faubourg Saint Honoré, 75-Paris 8e. WTD in prep.

Abrasive, asbestos, nonmetallic mineral products

32950—ITALY—Kaolin for rubber industry. V. Antonio Leone & C., S.a.s. (importer, agent), Corso Massimo d'Azeglio 76, 10126 Torino. WTD 2/71.

32990—MOROCCO—Mica, sheet Formica, or equal, products, used in paneling, furniture. Ets. Alberto Parres (importer, dist., agent), Rue Rembrandt 19, Tangier. WTD 10/71.

Heating apparatus, plumbing fixtures

34310—FRANCE—Sanitary ware such as bathroom, plumbing fixtures. Halard S.A. (dist., mfr.), 50, rue du Faubourg Saint Honoré, 75-Paris 8e. WTD in prep.

34320—FRANCE—Bath and shower fittings; lavatory fittings; sink fittings, sink faucets. Halard S.A. (dist., mfr.), 50, rue du Faubourg Saint Honoré, 75-Paris 8e. WTD in prep.

34320—JAMAICA — Sanitary plumbing fixtures—full range. Quotations c.i.f. Kingston. Arwin Ltd; Attn: A. F. Chang (importer, agent), 118 Barry St., Kingston. WTD 6/71.

34335—NETHERLANDS — Boilers for confectionery industry. Interventio (importer, dist.), Riouwstraat 161, The Hague. WTD in prep.

Fabricated structural metal products

34430—FRANCE—Cooling towers, metal plate. Ets Rouaux & Cie (importer, mfr.), 4, ave. du Bois, 95-Deuil-la-Barre. WTD in prep.

34440—FRANCE—Cooling towers, sheet metal. Ets Rouaux & Cie (importer, mfr.), 4, ave. du Bois, 95-Deuil-la-Barre. WTD in prep.

Fabricated metal products

34941—NETHERLANDS — Automatic regulating and control valves for chemical industry. Indumij N. V. (importer, dist.), P.O. Box 1222, The Hague. WTD in prep.

34941—SOUTH AFRICA—Stop valves of blow and gate types. Valves should preferably range from 3000 P.S.I.G. and 1500 degrees fahrenheit. Union Steam (Pty.) Ltd. (importer, dist., agent), P.O. Box 31516, Braamfontein, Johannesburg. WTD 10/71.

34944—AUSTRIA—Valves, fittings for pneumatic, oil-hydraulic power transfer including directional, pressure, flow and volume control. Industriebedarf-Faulhaber, Inh. Lois Scheiblbrandner, Technischer Groszhandel (importer, dist., agent), Hermanngasse 22, A-1071 Vienna. WTD in prep.

Engines, turbines

35192—UGANDA—Diesel, semi diesel engines. Armostahl A.G. (importer, agent), P.O. Box 3575, Kampala. WTD 10/71.

35192—VIET NAM—Small gasoline engines from 1 to 15 hp. Quotations, brochures requested. Thai Binh Duong Cong Ty (PACIFICO) (importer, dist., agent), 147 Trinh Minh The, P.O. Box 876, Saigon. WTD 10/71.

35193—VIET NAM—Diesel engines (up to 500 KVA). Quotations, brochures requested. Thai Binh Duong Cong Ty (PACIFICO) (importer, dist., agent), 147 Trinh Minh The, P.O. Box 876, Saigon. WTD 10/71.

Construction, mining, materials handling machinery, equipment

35319—NETHERLANDS — Pulverizers, grinders for construction work. Chemavox N.V. (importer, dist.), Regentesselaan 9a, Rijswijk (Z.H.) WTD in prep.

Metalworking machinery

35411—TAIWAN—Machine tools including surface grinder, internal grinder, cylindrical grinder, gear grinder, milling machine, hobbing machine, planer machine, drilling machine, testing machine, boring machine, turret lathe. Oshiu Trading Co., Ltd. (importer, agent, exporter), 20, Lane 76, Lung Chiang St., Taipei 104. WTD in prep.

35482—ITALY—Recent and novel applications in power-driven handtools, including parts, attachments. Exclusive agency. Societa' Industrie Frapolli, S.r.l. (importer, dist., retailer), Via Nizza 32, 10125 Torino. WTD 11/70.

35482—VIET NAM—Small hand tools (except saws, files) for use in agriculture, industry. Quotations, brochures requested. Thai Binh Duong Cong Ty (PACIFICO) (importer, dist., agent), 147 Trinh Minh The, P.O. Box 876, Saigon. WTD 10/71.

35484—SWITZERLAND — Automotive maintenance equipment, bodyshop machinery, supplies. Hans Lüthi, Attn: Peter Eschler (importer, agent), Koenizstrasse 217, P.O. Box, 3098 Koeniz. WTD 10/71.

Special industry machinery

35512 — NETHERLANDS — Machinery for chewing gum plants. Interventio (importer, dist.), Riouwstraat 161, The Hague. WTD in prep.

35513—NETHERLANDS — Packaging machinery for confectionery industry. Interventio (importer, dist.), Riouwstraat 161, The Hague. WTD in prep.

35521—SWITZERLAND — Textile yarn winding machinery, hosiery, other circular knit machines, yarn preparing machines, trimming, fabric producing machines, embroidery work machines. Boppart & Co. AG (dist., mfr.), Rietbergstr. 49, 9403 Goldach. WTD 10/71.

35540—PAKISTAN — Paper industries machinery, parts, attachments. Zaminos (agent), 106-107 WAPDA House, Shahrah-e-Quaid-e-Azam, Lahore. WTD in prep.

35552—GERMANY — Screen-printing machines for production of printed circuits; special printing machines for packaging industry; zig-zag folding machines for continuous business forms. Karl Gronemeyer KG. (importer, dist., agent), 35 Moerfelder Landstr., Postf. 1306, 6070 Langen/Hessen. WTD 4/71.

35592—ISRAEL—Machines for injection of aluminum alloys into molds for general industrial use. Manufacturing & Import of Industrial Equipment Ltd.—FAB (dist., mfr., agent), P.O. Box 8155, 18 Shimon Hatzadik St., Yafo. WTD 3/71.

35593—ITALY — Plastics-working machinery, equipment. V. Antonio Leone & C., S.a.s. (importer, agent), Corso Massimo d'Azeglio 76, 10126 Torino. WTD 2/71.

35594—ITALY — Rubber-working machinery, equipment. V. Antonio Leone & C., S.a.s. (importer, agent), Corso Massimo d'Azeglio 76, 10126 Torino. WTD 2/71.

35595—ISRAEL — Beach-cleaning/sand-sifting machinery, equipment. Excl. agency. A. Putziger (importer, dist., agent), 9 Hayarkon St., Haifa. WTD in prep.

General industrial machinery

35611 — NETHERLANDS — Pumps for chemical industry. Indumij N.V. (importer, dist.), P.O. Box 1222, The Hague. WTD in prep.

35621—PAKISTAN — Ball bearings, complete. Multi Traders (agent), P.O. Box 1351, 22 McLeod Rd., Lahore. WTD 10/71.

35622—PAKISTAN—Laper roller bearings, complete. Multi Traders (agent), P.O. Box 1351, 22 McLeod Rd., Lahore. WTD 10/71.

35642—AUSTRIA—Industrial air pollution control equipment. Afriso-Euro-Index (importer, dist., mfr.), Maria-Theresien-Strasse 8, A-6890 Lustenau, Vorarlberg. WTD in prep.

35662—AUSTRIA—Speed changers, industrial high-speed drives, gears. Industriebedarf-Faulhaber, Inh. Lois Scheiblbrandner, Technischer Groszhandel (importer, dist., agent), Hermanngasse 22, A-1071 Vienna. WTD in prep.

35663—AUSTRIA — Fittings, components, accessories for pneumatic, oil-hydraulic systems. Industriebedarf-Faulhaber, Inh. Lois Scheiblbrandner, Technischer Groszhandel (importer, dist., agent), Hermanngasse 22, A-1071 Vienna. WTD in prep.

Office machines

35730—NETHERLANDS — Computer software services, packages; particularly interested in time-sharing, tele-processing, data banks, management information systems. Exclusive agency. Combinatie Samenwerkende Rekencentra N. V. (importer, dist., agent), 5 A.J. Ernststraat, Amsterdam. WTD in prep.

35733—ITALY—Card readers, printers, numerical displays. ECO-Elettro Controlli S.p.A. (dist.), Via Pietro Giannone 9, 20154 Milan. WTD 4/71.

35733—SWITZERLAND — Electronic data processing equipment, peripherals, automation processes for industry, except business machines. Thomas Worthington (importer, agent), Import-Export Agency, 3073 Guemligen-Muri. WTD 10/71.

35791—BRAZIL—Check signers, check protectors, spirit and ink duplicating machines. Exataprint de Maquinas e Materiais para Escritórios Ltda. (dist., mfr.), Alameda Glete, 700 São Paulo, S.P. WTD 10/71.

35791—SOUTH AFRICA — Bursters, paper shredders, decolators, guillotines for use with computer operations. Computer Supply Corp., Attn: A.D. Scheffer (importer, dist., mfr.), P.O. Box 61545, Marshalltown, Johannesburg. WTD in prep.

35792—BRAZIL—Master plates for offset duplicating machines. Exataprint de Maquinas e Materiais para Escritórios Ltda. (dist., mfr.), Alameda Glete, 700 São Paulo, S.P. WTD 10/71.

Service industry machines

35852—FRANCE—Commercial air conditioners. Ets Rouaux & Cie (importer, mfr.), 4, ave. du Bois, 95-Euil-la-Barre. WTD in prep.

35852—FRANCE—Commercial air conditioners. Societe Sadac (importer, dist.), 29, rue Pastorelli, Immeuble Nice-Europe, 06-Nice. WTD in prep.

35853—FRANCE — Commercial refrigerating units. Ets Rouaux & Cie (importer, mfr.), 4, ave. du Bois, 95-Deuil-la-Barre. WTD in prep.

35857—AUSTRIA—Air conditioners for automotive vehicles. Afriso-Euro-Index (importer, dist., mfr.), Maria-Theresien-Strasse 8, A-6890 Lustenau, Vorarlberg. WTD in prep.

35857 — VIET-NAM — Auto airconditioners. Requests catalogs, quotations c.i.f. Saigon. Cogema Viet Nam (importer, dist., agent), 406 Trinh Minh The, P.O. Box L 15, Saigon. WTD 10/71.

35892—AUSTRIA—Water purification, conditioning equipment for public, private swimming pools. Eller Saunabau Ges.m.b.H., Import-Export (importer, dist. (wholesale), agent), Untere Viaduktgasse 47, A-1030 Vienna. WTD in prep.

35892—MOROCCO — Garbage Disposal Units, dishwashing machines (hotels & restaurants), Ets. Alberto Parres (importer, dist., agent), Rue Rembrandt 19, Tangier. WTD 10/71.

Machinery

35992—JAMAICA—Copper tubing of all sizes. Quotations c.i.f. Kingston. Arwin Ltd.; Attn: Arnold F. Chang (importer, agent), 118 Barry St., Kingston. WTD 6/71.

Electric transmission, distribution

36113 — ITALY — Dynamometers. V. Antonio Leone & C., S.a.s. (importer, agent), Corso Massimo d'Azeglio 76, 10126 Torino. WTD 2/71.

Electrical industrial apparatus

36220—AUSTRIA — Industrial controls for operation of machinery, production equipment. Industriebedarf-Faulhaber, Inh. Lois Scheiblbrandner, Technischer Groszhandel (importer, dist., agent), Hermanngasse 22, A-1071 Vienna. WTD in prep.

36220—SWITZERLAND—Industrial controls, all kinds, in particular for automation processes. Thomas Worthington (importer, agent), Import Export Agency, 3073 Guemligen-Muri. WTD 10/71.

Household appliances

36342 — MEXICO — Electric razors for sale in Free Zone sales off Yucatán coast. Correspondence requested in Spanish. Representaciones Garmad (Carlos Moíses Elías) (importer, dist., retailer), Isla Mujeres, Quintana Roo. WTD in prep.

36343 — FRANCE — Heating apparatus using catalysis process. R.G. (S.A.) (importer, mfr.), 125, rue Jules-Guesde, 92-Levallois-Perret. WTD 4/71.

36343—MEXICO—Small electric appliances for sale in free zone sales off Yucatan coast. Correspondence requested in Spanish. Representaciones Garmad (Carlos Moíses Elías) (importer, dist., retailer), Isla Mujeres, Quintana Roo. WTD in prep.

36343—SWITZERLAND—Small electric household appliances, food mixers, shoe cleaners, can openers, novelties; 220 Volt, 50 hz. Boppart & Co. AG (dist., mfr.), Rietbergstr. 49, 9403 Goldach. WTD 10/71.

36350—SWITZERLAND — Small, power driven brushing machines, eventually combined with vacuum cleaners for limited commercial, domestic use. Bursten fabrik Ebnat-Kappel AG, Attn: Mr. Boesch (dist., mfr.), 9642 Ebnat-Kappel. WTD 10/71.

Radio, television receiving sets

36511—MEXICO—Radios for sale in free-zone sales off Yucatán coast. Correspondence requested in Spanish. Representaciones Garmad (Carlos Moíses Elías) (importer, dist., retailer), Isla Mujeres, Quintana Roo. WTD in prep.

36512—MEXICO — Television sets for sale in free-zone sales off Yucatán coast. Correspondence requested in Spanish. Representaciones Garmad (Carlos Moíses Elías) (importer, dist., retailer), Isla Mujeres, Quintana Roo. WTD in prep.

36514—MEXICO—Recorders, tuners for sale in free-zone sales off Yucatán coast. Correspondence requested in Spanish. Representaciones Garmad (Carlos Moíses Elías) (importer, dist., retailer), Isla Mujeres, Quintana Roo. WTD in prep.

Electronic components, accessories

36740—ITALY—Light emitting diodes, indicator light. ECO-Elettro Controlli S.p.A. (dist.), Via Pietro Giannone 9, 20154 Milano. WTD 4/71.

36790—ITALY—Toggle and push button switches, reeds relays, transducers. ECO-Elettro Controlli S.p.A. (dist.), Via Pietro Giannone 9, 20154 Milan. WTD 4/71.

36795—NETHERLANDS—Nuclear electronics. Intechmij. N.V. (importer, dist.), Hoogkarspelstraat 68, The Hague. WTD in prep.

Electrical machinery, equipment

36930 — NETHERLANDS — X-ray recorders, electro therapeutic apparatus. Intechmij. N.V. (importer, dist.), Hoogkarspelstraat 68, The Hague. WTD in prep.

Motor vehicles, equipment

37130—THAILAND—Bus chassis, engines for bus assemblers. Requests catalogs, c.i.f. Bangkok prices. Chuang Pong Pun Ltd., Partnership (importer, dist.), 1806/57 Bantadtong Rd., Patumwan, Bangkok. WTD 8/71.

37140—VIET-NAM — Equipment, parts to convert cars to campers, mobile sales, service vans. Requests catalogs, c.i.f. Saigon quotations. Cogema Viet-Nam (importer, dist., agent), 406 Trinh Minh The, P.O. Box L 15, Saigon. WTD 10/71.

37141—ISRAEL—Automotive parts, ac-

cessories; all kinds (specifically clutch discs, pressure plates). Shahar Ltd. (agent, retailer, repair-shops), 35 Bar-Kochba St., Petah-Tiqva. WTD 9/71.

Railroad equipment

37411—PAKISTAN — Locomotives, new and rebuilt, railroad service. Multi Traders (agent), P.O. Box No. 1351, 22 McLeod Rd., Lahore. WTD 10/71.

37413—PAKISTAN—Parts for locomotives, for sale separately. Multi Traders (agent), P.O. Box No. 1351, 22 McLeod Rd., Lahore. WTD 10/71.

Laboratory, scientific instruments

38112—GERMANY — Laboratory, scientific instruments. Biotronik, Wissenschaftliche Geraete GmbH. (importer, dist., agent), 22 Borsigallee, 6000 Frankfurt/Main. WTD 10/71.

38112—SWITZERLAND—Advanced scientific, laboratory instruments for industry, laboratories, universities, hospitals, all kinds. Instrumenten-Gesellschaft AG, Attn: Marcel Witzthum, Pres. (dist., agent), Turbinenstrasse 31a, 8005 Zurich. WTD 10/70.

38112—SWITZERLAND — Scientific instrumentation, all kinds. Thomas Worthington (importer, agent), Import-Export Agency, 3073 Guemligen-Muri. WTD 10/71.

Instruments for measuring, indicating, controlling physical characteristics

38213—AUSTRIA — Industrial process instruments for production equipment, machines. Industriebedarf-Faulhaber, Inh. Lois Scheiblbrandner, Technischer Groszhandel (importer, dist., agent), Hermanngasse 22, A-1071 Vienna. WTD in prep.

38213—SWITZERLAND—Industrial instrumentation, process control and measuring instruments, automation processes, all kinds. Thomas Worthington (importer, agent), Import Export Agency, 3073 Guemligen-Muri. WTD 10/71.

38216—AUSTRIA—Air pollutant measuring instruments. Afriso-Euro-Index (importer, dist., mfr.), Maria-Theresien-Strasse 8, A-6890 Lustenau, Vorarlberg. WTD in prep.

38216 — SWITZERLAND — Advanced measuring, controlling instruments, all kinds, for laboratory use, hospitals, universities, chemical, pharmaceutical industries. Instrumenten-Gesellschaft AG., Attn: Marcel Witzthum, Pres. (dist., agent), Turbinenstrasse 31a, 8005 Zurich. WTD 10/70.

Optical instruments, lenses

38311—GERMANY—Optical measuring instruments. Biotronik, Wissenschaftliche Geraete GmbH. (importer, dist., agent), 22 Borsigallee, 6000 Frankfurt/Main. WTD 10/71.

Surgical, medical, dental instruments

38410 — SWITZERLAND — Advanced medical equipment; sophisticated medical equipment; monitoring and intensive care systems; X-ray apparatus; medical supplies and bio-electronic accessories of advanced design not yet available in Europe; perinatal apparatus, bio-electronics. Ing. Rüegge AG, Attn: R. Schärer (importer, dist., agent), Austrasse 19, 5430 Wettingen. WTD 12/70.

38410 — SWITZERLAND — Advanced medical bio-electronic equipment, sophisticated medical instruments; monitoring and intensive care systems; lung function testing equipment. Meditron, Attn: Paul Bucher, Marketing Dir. (dist., mfr.), Kreuzstrasse 32, 6010 Kriens-Lucerne. WTD 11/71.

38410 — SWITZERLAND — Advanced medical instruments, all kinds. Instrumenten-Gesellschaft AG, Attn: Marcel Witzthum, Pres. (dist., agent), Turbinenstrasse 31a, 8005 Zurich. WTD 10/70.

38421—AUSTRIA — Balneological, physico-medical and mechano-therapeutic apparatus, equipment for rehabilitation hospitals for disabled persons. Agentur R. L. Dolezal & Co. (Oteplan) (agent), Wichtelgasse 49, A-1160 Vienna. WTD in prep.

Photographic equipment, supplies

38611—MEXICO—Still cameras. Correspondence requested in Spanish. Representaciones Garmad (Carlos Moises Elias) (importer, dist., retailer), Isla Mujeres, Quintana Roo. WTD in prep.

38612—BRAZIL — Electrostatic photocopying equipment, both sides of page. Exataprint de Maquinas e Materiais para Escritórios Ltda. (dist., mfr.), Alameda Glete, 700-São Paulo, S.P. WTD 10/71.

Jewelry, silverware, plated ware

39142—MOROCCO—Cutlery; table, kitchen; silver plated, stainless steel; other flatware. Ets. Alberto Parres (importer, dist., agent), Rue Rembrandt 19, Tangier. WTD 10/71.

Toys, amusement, sporting goods

39490—NORWAY — Swimming pools, complete with accessories. O. Desbans (agent), Keysersgate 4, Oslo 1. WTD 10/71.

Manufacturing industries

39910—SWITZERLAND—Novel cleaning appliances for domestic, commercial use such as shampooing brushes, rollers, applicators for detergents, all kinds of cleaning preparations. Bursten fabrik Ebnat-Kappel AG, Attn: Mr. Boesch (dist., mfr.), 9642 Ebnat-Kappel. WTD 10/71.

Business services

73920 — NETHERLANDS — Computer software: software packages for use in all phases of hospital activity, including inventory control, billing, scheduling of patients and personnel, etc., especially systems designed for use by smaller hospitals and by personnel with minimal training in automation; simple data management systems for use in hospitals, industry. Maco Systems N.V., Attn: Drs. M. H. de Jong (software house), St. Canisiussingel 1, Nijmegen. WTD in prep.

Other Foreign Official Tenders

ARGENTINA—The Agua Y Energia Electricas has issued tender no. 180/71 for the supply installation, and commissioning of **telecommunications equipment.** Bid deadline is Dec. 17. Bid should offer telecommunications equipment and VHF radio equipment for the power transformer system of the Province of Entre Rios. Official budget for this project is 2.3 million pesos, partially financed by an Inter American Development Bank loan. Copies of tender announcement and specifications are available ONLY from the Agua Y Energia Electrica, Corrientes 531, Piso 1 Buenos Aires, Argentina for 150 pesos per copy.

BOLIVIA—The Corporacion Boliviana de Fomento, Ave. Camacho 1485 Edificio la Urbana, P.O. Box 1124, La Paz, has issued a tender with a bid deadline of Dec. 29, for a **turnkey project for a sheet glass (window) production plant.** The plant should be designed to produce 30 m.t. per day to assure a production of 9,600 m.t. yearly. The project covers the following items: glassmaking machinery and equipment, complementary installations, electric installation, spare parts; construction, metallic structures, construction materials; sea and land transportation and engineering, know-how and initial operation. Copies of tender available from Corporacion Boliviana de Fomento for approximately $20. Correspondence preferred in Spanish. Copy of tender is available on a short term loan basis to firms domiciled in the U.S. from the General Industries Division, BDC-772, U.S. Dept. of Commerce, Washington, D.C. 20230 (202-967-5520).

CHILE—Instituto Nacional de Capacitacion Professional (INACAP), Santiago has extended from Nov. 12 to Dec. 10 their tender (No. 147-SF-CH) for five mobile teaching units. See *Commerce Today*, Nov. 18, p. 68, and *Commerce Business Daily*, Oct. 7, p. 22.

Visiting Buyers And Officials

AFGHANISTAN — Abdul Rahman Rahimi, Bazar-i-Omid Association, P.O. Box 3101, Kabul, interested in contacting U.S. exporters of **textile materials and used clothing** and importers of **handicrafts and leather products.** Late November via New York for three months. c/o Frederick Rudzinski, 54 Halliday Ave., Yonkers, N.Y. 10701. Itinerary: New York, Washington, D.C., Los Angeles. WTD in preparation.

AFGHANISTAN—Abdul Rahman, Ishan Mohammed Khwaja & Bros., P.O. Box 559, Kabul, interested in discussing possibilities of purchasing **room air-conditioners, radios, other U.S. electrical home appliances, and building materials.** Nov. 15 via New York for three weeks. c/o Faiz Mohammed, Vice President, The Trading Co. of Afghanistan, 126 W. 30th St., New York, N.Y. 10001. Itinerary: New York, Washington, D.C., Chicago. WTD 7/70.

ISRAEL—Avraham Tiber, General Manager, EMCI (Electro Chemical Components Israel), 11 Maharal St., Tel Aviv, interested in sales representations for **electrical components** and requesting technical information on electrical components, particularly switches, diodes, connectors. Mid-Nov. via New York for 2-3 mos. c/o Consulate General of Israel, 11 E. 70 St., New York, N.Y. 10021 (212-879-7600). Itinerary: Portland, Ore., San Francisco, Los Angeles, Dallas, Minneapolis, St. Louis, Chicago, Detroit, Cleveland, Buffalo, New York, Hartford, Boston, Philadelphia, Pittsburgh, Richmond, Washington, D.C. WTD 1/71.

International Business Reports

Directory of American Business in Germany (Handbuch der Amerikanischen Wirtschaftsverbindungen in Deutschland). 4th Edition, 1971. In English and German. 536 pp. $16.80.

The new edition of this bilingual guide brings up to date the addresses of U.S. subsidiaries, distributors, licensees, and agents in the Federal Republic of Germany. It lists 5,000 U.S. firms, as well as about 4,000 German firms with the addresses of their U.S. business partners.

Compiled by Paul G. Baudler, Executive Secretary of the American Chamber of Commerce in Germany, the directory also provides a listing of the addresses and telephone numbers of important U.S. offices in Germany.

Write: SEIBT-Verlag, 8000 Muenchen 80, Anzinger Strasse 1.

VIe Plan du Developpement Economique et Social, 1971-1975. In French. 340 pp. 12 French Francs (about $2.16).

This is a comprehensive report on the Sixth Economic and Social Development Plan, the blueprint for French economic growth through 1975. Objectives and priorities are set for economic aggregates (e.g., prices, exports, savings, employment), specific sectors (fisheries, industry, trade, tourism) and areas of general public concern. The report also includes plans for the overseas departments and territories.

Write: Imprimerie des Journaux Officiels, 26 rue Desaix, 75-Paris 15, France.

Export Prospects for the Republic of Vietnam. Prepared by the Development and Resources Corporation. 414 pp. $20.

This study evaluates export prospects in light of Vietnam's need to expand foreign exchange earnings, analyzing characteristics of demand in markets in the region for key Vietnamese export products. The authors make recommendations for monetary policy, export promotion, quality control, capital and credit, export procedures, and trade organizations.

Write: Praeger Publishers, 111 Fourth Ave., New York, N.Y. 10003.

The World Today Series: Africa, Latin America, Middle East and South Asia, Far East and Southwest Pacific, USSR and East Europe. 89-102 pp. $1.95 each.

These are the 1971 editions of annually revised area reports on the geography, history, politics, culture and economic outlook of nations of the world. Country maps are included in each book.

Write: Stryker-Post Publications, Inc., 888 17th St. NW., Washington, D.C. 20006.

Directory of Greek Commercial Agents 1971. Compiled by the Athens Assn. of Commercial Agents and distributed by Publico. International edition. Published every other year. 330 pp. $10.

Provides up-to-date information about 2,500 Greek Commercial Agents—members of the Athens Association of Commercial Agents. It also contains an alphabetical index of goods imported into Greece (in four languages—English, German, French, and Greek); an alphabetical list of commercial agents classified according to the goods they handle; and useful trade information on Commercial Associations, Chambers of Commerce and Industry, and Foreign Chambers of Commerce.

Write: Publico, 5 Karitsi Square, Athens 124, Greece.

Calendar For World Traders

Dec. 1-3—New York—AMA briefing session on taxation of international operations, AMA headquarters.

Dec. 6—Kansas City—Sea-Land containerization luncheon, Gold Buffet, noon. Sponsors: Traffic Club, International Trade Club, Commerce Field Office.

Dec. 6-8—New York—AMA orientation seminar on compensation of overseas employees, AMA headquarters.

Dec. 7—Emporia, Kan.—Meeting for exporters, Rotary Club, noon. Sponsors: Rotary International, Kansas City Field Office.

Dec. 7—New York—FCIB luncheon and conference on international finance, credit and collection problems, Summit Hotel, noon.

Dec. 8—New York—FCIB publishers export credit group dinner meeting, Advertising Club, 4 p.m.

Dec. 8—Wallingford, Conn.—General luncheon meeting of the Combination Export Managers Assn. of Connecticut, Yankee Silversmith Inn, 11:15 a.m.

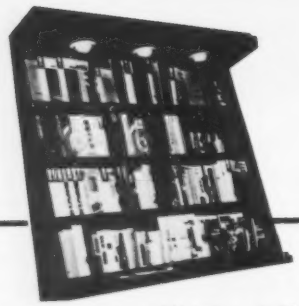
Dec. 8-9—Wichita—Export seminar, Holiday Inn. Sponsors: REEC, SBA, Chamber of Commerce, FCIA, Eximbank, Kansas City Field Office.

Dec. 9—New York—Meeting of the Overseas Automotive Club, Summit Hotel, noon.

Dec. 10—Cedar Rapids, Iowa—Eximbank Conference, Roosevelt Motor Hotel, 10 a.m.-noon or 1:30-3:30 p.m. Sponsors: Iowa REEC, Des Moines Field Office.

Dec. 13-17—New York—AMA course on International Licensing, AMA headquarters.

Dec. 15—Atlanta—Eximbank area conference, First National Bank Auditorium, 9:30-noon. Speaker: R. X. McCullough, director, Eximbank.



New Publications

When ordering any publication, indicate title and series designation, if indicated, and make checks or money orders payable to the Superintendent of Documents. Orders should be sent to the U.S. Department of Commerce, Washington, D.C. 20230, or to any of its field offices.

OFFICE OF THE SECRETARY

OFFICE OF MINORITY BUSINESS ENTERPRISE

OMBE outlook. September 1971. Monthly publication providing information on the Office of Minority Business Enterprise. Free upon request.

DOMESTIC AND INTERNATIONAL BUSINESS

BUR. OF DOMESTIC COMMERCE

Construction review. Monthly industry report. Vol. 17, No. 9. Annual subscription $6.50 ($1.75 more for foreign mailing). Single copy 55¢.

Industry profiles 1958-1969. 308 pp. $2.25. This fifth edition presents a statistical picture of economic developments in each 527 manufacturing industries and groups.

Authorized construction-San Francisco Bay Area: September 1971 (SF—C—). 8pp.

Environmental control seminar proceedings. 310pp. $2.25. Contains the papers presented during a series of seminars on water and air pollution controls conducted in Rotterdam, Warsaw and Bucharest, May 24-June 4.

BUR. OF INTERNATIONAL COMMERCE

Foreign Economic Trends

Annual subscription $15 ($6 more for foreign mailing). Single copy 10¢.
Turkey (ET 71-102). 12pp.

International Marketing Infor. Service

Exhibitor's Export Market Guide

Expansion of Scandinavian mass-service facilities spurs demand for U.S. exports (IMIS 71-034). 8pp. 10¢.
French manufacturers seek materials test and quality control equipment. (IMIS 71-041). 4pp. 10¢.

Overseas Business Reports

Annual subscription $16 ($5 more for foreign mailing). Single copy 15¢.
Market profiles for the Far East (OBR 71-044). Supersedes OBR 70-27. 16pp.

World Markets for U.S. exports

Pumps, valves and compressors—Indonesia (IMIS 71-238). 12pp. 10¢.
Pumps, valves and compressors—Korea (IMIS 71-239). 12pp. 10¢.
Pumps, valves and compressors—Australia (IMIS 71-240). 12pp. 10¢.
Pumps, valves and compressors—The Philippines (IMIS 71-241). 12pp. 10¢.
Pumps, valves and compressors—France (IMIS 71-242). 12pp. 10¢.

ECONOMIC AFFAIRS

OFFICE OF BUSINESS ECONOMICS

Survey of current business. Vol. 51, No. 10. Annual subscription, excluding weekly supplements $9 ($3.75 more for foreign mailing). Single copy $1.

BUREAU OF THE CENSUS

Districts of the 93d Congress. These reports are included in a series of separate State reports presenting 1970 population and housing data and recent election statistics for districts of the 93rd Congress.

Montana (CDD-93X-24). 4pp. 25¢.
South Dakota (CDD-93X-38). 4pp. 25¢.
Utah (CDD-93X-41). 4pp. 25¢.

Business conditions digest. Data through September 1971. Series ES1 No. 71-10. Annual subscription, including supplements $15 ($3.75 more for foreign mailing). Single issue $1.50. This monthly report brings together many of the economic time series found most useful by business analysts and forecasters.

Defense indicators. Series ES4 No. 71-10. Annual subscription $3.50 ($1 more for foreign mailing). Single copy 35¢. Brings together the principal time series on defense activity which influence short-term changes in the national economy.

Construction and Housing

New one-family homes sold and for sale: August 1971 (C25-71-8). Annual subscription $3. Single copy prices: monthly 10¢, and annual $1. Issued jointly by the Bureau of the Census and Department of Housing and Urban Development.

Residential alterations and repairs—expenditures on residential additions, alterations, maintenance and repairs, and replacements: second quarter 1971 (C50-71-Q2). Annual subscription, including two-part annual report, $1.50. Single copy 25¢.

Value of new construction put in place: 1958 to 1970 (C30-70S). Annual subscription $2.50 (75¢ more for foreign mailing). This issue $1.

Housing authorized by building permits and public contracts: August 1971 (C40-71-8). Series C40, $8 per year ($2 more for foreign mailing). Single copy 55¢.

1970 Census of Housing

General Housing Characteristics

California (HC(1)-A6). 240pp. $2.75.
Pennsylvania (HC(1)-A40). 176pp. $2.25.
Virginia (HC(1)-A48). 108pp. $1.25.

Block statistics

Reports in this series present statistics from the 1970 Census by blocks on general characteristics of housing and population:

Gadsden, Ala. urbanized area (HC(3)-2). 38 pp. and 9 maps. $2.
Mobile, Ala. urbanized area (HC(3)-4). 58pp. and 12 maps. $2.50.
Tuscaloosa, Ala. urbanized area (HC(3)-6). 32pp. and 5 maps. $1.50.
Selected areas in Alabama (HC(3)-7). 32pp. and 3 maps. $1.
Fort Smith, Ark.-Okla. urbanized area (HC(3)-12). 42pp. and 7 maps. $1.75.
Selected areas in Arkansas (HC(3)-15). 30pp. and 3 maps. $1.
Bristol, Conn. urbanized area (HC(3)-35). 28pp. and 7 maps. $1.75.
Albany, Ga. urbanized area (HC(3)-55). 30pp. 5 maps. $1.50.
Atlanta, Ga. urbanized area (HC(3)-56). 138pp. and 24 maps. $6.50.
Columbus, Ga.-Ala. urbanized area (HC(3)-58). 50pp. and 9 maps. $2.
Macon, Ga. urbanized area (HC(3)-59). 38pp. and 8 maps. $1.75.
Savannah, Ga. urbanized area (HC(3)-60). 47pp. 8 maps. $1.75.
Selected areas in Georgia (HC(3)-61). 26pp. 4 maps. $1.25.
Bloomington-Normal, Ill. urbanized area (HC(3)-66). 29pp. and 7 maps. $1.75.
Sioux City, Iowa-Nebr.-S. Dak. urbanized area (HC(3)-88). 44pp. and 8 maps. $1.75.
Baton Rouge, La. urbanized area (HC(3)-97). 56pp. and 10 maps. $2.
Lafayette, La. urbanized area (HC(3)-98). 32pp. and 5 maps. $1.50.
Lake Charles, La. urbanized area (HC(3)-99). 40pp. and 5 maps. $1.50.
Monroe, La. urbanized area (HC(3)-100). 38pp. and 7 maps. $1.75.
New Orleans, La. urbanized area (HC(3)-101). 142pp. and 22 maps. $5.50.
Shreveport, La. urbanized area (HC(3)-102). 54pp. and 10 maps. $2.25.
Grand Rapids, Mich. urbanized area (HC(3)-122). 62pp. and 13 maps. $2.75.
Muskegon-Muskegon Heights, Mich. urbanized area (HC(3)-126). 38pp. and 7 maps. $1.75.
Springfield, Mo. urbanized area (HC(3)-138). 42pp. and 7 maps. $1.75.
Great Falls, Mont. urbanized area (HC(3)-141). 32pp. and 5 maps. $1.50.
Selected areas in Montana (HC(3)-142). 36pp. and 3 maps. $1.
Omaha, Nebr.-Iowa urbanized area (HC(3)-144). 116pp. and 11 maps. $3.
Selected areas in New Hampshire (HC(3)-149). 38pp. and 11 maps. $1.50.
Albuquerque, N. Mex. urbanized area (HC(3)-154). 64pp. and 10 maps. $2.50.
Selected areas in New Mexico (HC(3)-155). 32pp. and 2 maps. $1.
Fayetteville, N. C. urbanized area (HC(3)-167). 34pp. and 9 maps. $2.
Lorain-Elyria, Ohio urbanized area (HC(3)-183). 42pp. and 13 maps. $2.50.
Mansfield, Ohio urbanized area (HC(3)-184). 30pp. and 6 maps. $1.50.

Springfield, Ohio urbanized area (HC (3)-185). 32pp. and 4 maps. $1.50.

Youngstown-Warren, Ohio urbanized area (HC(3)-188). 74pp. and 13 maps. $2.75.

Tulsa, Okla. urbanized area (HC(3)-192). 88pp. and 16 maps. $3.50.

Selected areas in Oklahoma (HC(3)-193). 30pp. and 2 maps. $2.50.

Eugene, Ore. urbanized area (HC(3)-194). 40pp. and 8 maps. $1.75.

Salem, Ore. urbanized area (HC(3)-196). 32pp. and 6 maps. $1.75.

Altoona, Pa. urbanized area (HC(3)-199). 30pp. and 4 maps. $1.25.

Erie, Pa. urbanized area (HC(3)-200). 42pp. and 4 maps. $1.50.

Scranton, Pa. urbanized area (HC(3)-207). 53pp. and 10 maps. $2.25.

York, Pa. urbanized area (HC(3)-209). 35pp. and 8 maps. $1.75.

Columbia, S.C. urbanized area (HC(3)-213). 52pp. and 12 maps. $2.50.

Selected areas in South Dakota (HC(3)-217). 25pp. and 3 maps. $1.

Knoxville, Tenn. urbanized area (HC(3)-219). 46pp. and 11 maps. $2.50.

Lynchburg, Va. urbanized area (HC(3)-254). 26pp. and 6 maps. $1.50.

Newport News-Hampton, Va. urbanized area (HC(3)-255). 39pp. and 14 maps. $2.50.

Roanoke, Va. urbanized area (HC(3)-258). 43pp. and 8 maps. $1.75.

Spokane, Wash. urbanized area (HC(3)-261). 76pp. and 9 maps. $2.50.

Tacoma, Wash. urbanized area (HC(3)-262). 70pp. and 13 maps. $2.75.

Distribution and Services

Weekly retail sales. Estimated sales of U.S. retail stores, week ending Nov. 6 (CB 71-368). 2pp. 10¢.

Foreign Trade

Highlights of exports and imports: September 1971 (FT 990-71-9). Annual subscription $5 ($1.25 more for foreign mailing). Single copy 45¢.

Gold movements: September 1971 (FT 2402-71-9). Annual subscription $1. Single copy 10¢.

Governments

Local Government finances in selected metropolitan areas and large counties: 1969-70 (GF70 No. 6). 132pp. $1.25.

Industry

Confectionery, including chocolate products: seasonal adjustment supplement—1959 to July 1971 (Series: M20C Supplement 2).

Fats and oils production, consumption, and factory and warehouse stocks: summary for 1970 (Series: M20K(70)-13). 18pp. Price 15¢. $3 per year (incl. M20J).

Textured yarn production: 1970 (Series: MA-22F.1(70)-1). 4pp. 25¢.

Spun yarn production: 1970 (Series: MA-22F.2(70)-1). 12pp. 25¢.

Narrow fabrics: 1970 (Series: MA-22G(70)-1). 8pp. 25¢.

Brassieres, girdles, and allied garments: 1970 (Series: MA-23J(70)-1). 8pp. 25¢.

Inorganic fertilizer materials and related acids: summary for 1970 (preliminary) (Series: M28B(70)-13). 15¢. $1.50 per year.

Refractories: summary for 1970 (Series: MQ-32C(70)55). 25¢. $1 per year.

Manmade fiber broadwoven goods: summary for 1970 (Series: MQ-22T.2(70)-5). 25¢. $1 per year.

Flat glass: summary for 1970 (Series: MQ-32A(70)-5). 8pp. 25¢ per copy; $1 per year.

Population

Population Characteristics

Marital status and living arrangements: March 1971 (Series P-20, No. 225). 42pp. 50¢.

Population Estimates and Projections

Estimates of the population of the United States to September 1, 1971 (Series P-25, No. 469). 2pp. 5¢.

Projections of the population of the United States, by age and sex: 1970 to 2020 (Series P-25, No. 470). 62pp. 60¢.

Current Population Reports issued in Series P-20, P-23, P-25, P-26, P-27, P-28 (summaries only), P-60, and P-65 are sold as a single consolidated subscription at $14 ($3.50 additional for foreign mailing).

1970 Census of Population

General Population Characteristics

California (PC(1)-B6). 307pp. $1.75.
Illinois (PC(1)-B15). 412pp. $2.
Ohio (PC(1)-B37). 259pp. $1.75.
Virginia (PC(1)-B48). 173pp. $1.50.
Maryland (PC(1)-B22). 125pp. 75¢.

General Social and Economic Characteristics

Montana (PC(1)-C28). 203pp. $1.75.

SCIENCE AND TECHNOLOGY

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Monthly weather review. Vol. 99, No. 10. Annual subscription $10.50 ($2.75 more for foreign mailing). Single copy $1.

NOAA. Vol. 1, No. 4. Annual subscription $3 (75¢ more for foreign mailing). Single copy 75¢. Published quarterly.

Environmental Research Laboratories

Preliminary determination of epicenters. Monthly listing. July 1971. Annual subscription $1.50 (50¢ more for foreign mailing). Single copy 15¢. Lists the approximate locations for earthquakes anywhere in the world.

Gravity anomalies and their relation to major tectonic features in the North-Central Pacific (ERL 214-POL 6). 30pp. 75¢.

A program for calculating three-dimensional acoustic-gravity ray paths in the atmosphere (ERL 212-WPL 16). 52pp. 50¢.

Strain measurements in the Aleutian Islands (ERL 215-ESL 17). 32pp. 35¢.

National Marine Fisheries Service

Annotated bibliography on the fishing industry and biology of the blue crab, callinectes sapidus (SSRF-640). 100pp. $1.

Use of threadfin shad, Dorosoma petenense, as live bait during experimental pole-and-line fishing for skipjack tunas, katsuwonus pelamis, in Hawaii (SSRF-641). 18pp. 25¢.

National Ocean Survey

Color aerial stereograms of selected coastal areas of the United States. 1971. $4.75. This book contains stereoscopic aerial photographs which can be viewed three-dimensionally with a foldout cardboard stereoscope which is included.

Tidal Current Tables 1972. Pacific Coast of North America and Asia. Issued 1971. 264pp. $2.

A user's guide to a computer program for harmonic analysis of data at tidal frequencies (NOS 41). 39pp. 40¢.

The determination of focal mechanisms using P- and S-Wave data (NOS 44). 64pp. 60¢.

NATIONAL BUREAU OF STANDARDS

Federal Information Processing Standards

Subset of the standard code for information interchange (FIPS PUB 15). 16pp. 25¢. This publication provides three subsets of 95, 64 and 16 graphic characters derived from the Federal Standard Code for Information Interchange (FIPS 1), which was adopted from the American Standard Code for Information Interchange (ASCII) X3.4-1968.

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Legal, economic and technical aspects of liability and financial responsibility as related to oil pollution, Vol. II (PB-198 776). By George Washington U. for the U.S. Coast Guard. Paper, $6. 347pp.

Measures of the potential economic loss from oil pollution (AD-722 378). By the Center for Naval Analyses. 22pp.

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Design and development of a pilot terminal control system with automatic container identification (COM-71-00780). Computer Identics Corp. and Transocean Gateway Corp. for the Maritime Admin. 115pp. Discusses a system that employs optical scanning devices that read color coded labels applied to marine freight containers. In a marine terminal, data from the scanners on inbound and outbound container movements are transmitted directly to a central computer for on-line/real-time terminal control, terminal control, terminal security, and management reports.

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